```
Connecting via Winsock to STN


Welcome to STN International!  Enter x:x

LOGINID:ssspta1623kxg

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  SEP 01   New pricing for the Save Answers for SciFinder Wizard within
                   STN Express with Discover!
 NEWS  4  OCT 28   KOREAPAT now available on STN
 NEWS  5  NOV 30   PHAR reloaded with additional data
 NEWS  6  DEC 01   LISA now available on STN
 NEWS  7  DEC 09   12 databases to be removed from STN on December 31, 2004
 NEWS  8  DEC 15   MEDLINE update schedule for December 2004
 NEWS  9  DEC 17   ELCOM reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  10 DEC 17   COMPUAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  11 DEC 17   SOLIDSTATE reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  12 DEC 17   CERAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  13 DEC 17   THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB

 NEWS EXPRESS  OCTOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
 NEWS INTER    General Internet Information
 NEWS LOGIN    Welcome Banner and News Items
 NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
 NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

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  research.  Use for software development or design or implementation
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  * * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 14:12:19 ON 21 DEC 2004

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'REGISTRY' ENTERED AT 14:12:28 ON 21 DEC 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
```

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9
DICTIONARY FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

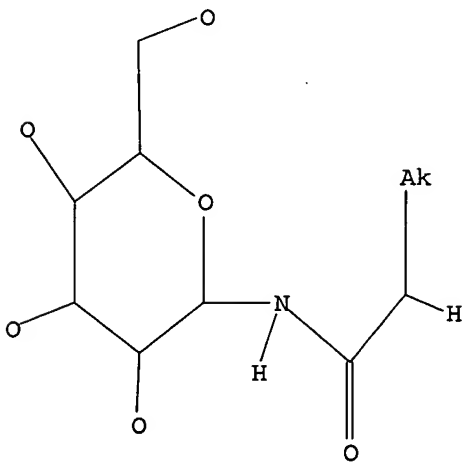
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
Uploading c:\10676436-2.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss sam
SAMPLE SEARCH INITIATED 14:12:59 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 453 TO ITERATE

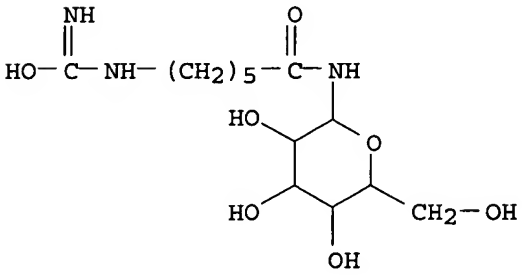
100.0% PROCESSED 453 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 7784 TO 10336
PROJECTED ANSWERS: 608 TO 1472

L2 50 SEA SSS SAM L1

=> d scan

L2 50 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN Carbamimidic acid, [6-(β-D-glucopyranosylamino)-6-oxohexyl]- (9CI)
MF C13 H25 N3 O7
CI COM

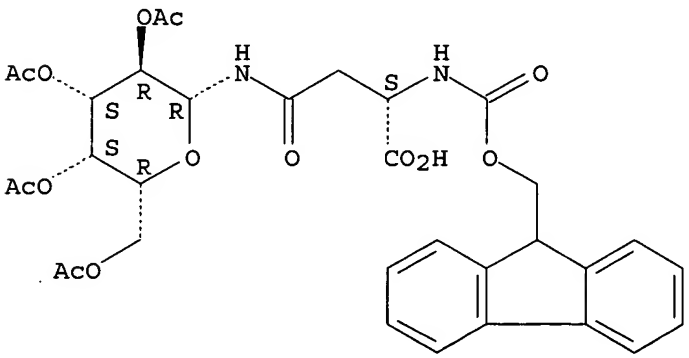


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 50 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN L-Asparagine, N2-[(9H-fluoren-9-ylmethoxy)carbonyl]-N-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)- (9CI)
MF C33 H36 N2 O14

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> s 1
SYSTEM LIMITS EXCEEDED - SEARCH ENDED
The search profile you entered was too complex or gave too many

```
answers.  Simplify or subdivide the query and try again.  If you have
exceeded the answer limit, enter DELETE HISTORY at an arrow prompt
(=>) to remove all previous answers sets and begin at L1.  Use the
SAVE command to store any important profiles or answer sets before
using DELETE HISTORY.

=> s l1 sss full
FULL SEARCH INITIATED 14:13:39 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   9751 TO ITERATE

100.0% PROCESSED    9751 ITERATIONS                          1100 ANSWERS
SEARCH TIME: 00.00.01

L3          1100 SEA SSS FUL L1

=> s l3 and (drug or biomolecule or bioactive?)
           1589 DRUG
              7 DRUGS
           1596 DRUG
                   (DRUG OR DRUGS)
              0 BIOMOLECULE
              4 BIOACTIVE?
L4            0 L3 AND (DRUG OR BIOMOLECULE OR BIOACTIVE?)

=> s l3 and (drug or bioactive)
           1589 DRUG
              7 DRUGS
           1596 DRUG
                   (DRUG OR DRUGS)
              4 BIOACTIVE
L5            0 L3 AND (DRUG OR BIOACTIVE)

=> s l3 and drug
           1589 DRUG
              7 DRUGS
           1596 DRUG
                   (DRUG OR DRUGS)
L6            0 L3 AND DRUG

=> s l3 and (spacer or linker or lipid? or glycerol)
          40752 SPACER
           1391 LINKER
              3 LINKERS
           1394 LINKER
                   (LINKER OR LINKERS)
           2046 LIPID?
          13148 GLYCEROL
              7 GLYCEROLS
          13148 GLYCEROL
                   (GLYCEROL OR GLYCEROLS)
L7            0 L3 AND (SPACER OR LINKER OR LIPID? OR GLYCEROL)

=> s l3 and conjugate
          29436 CONJUGATE
              5 CONJUGATES
          29436 CONJUGATE
                   (CONJUGATE OR CONJUGATES)
L8            0 L3 AND CONJUGATE

=> file caplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                               206.67     206.88
```

```
FILE 'CAPLUS' ENTERED AT 14:16:45 ON 21 DEC 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)
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FILE COVERS 1907 - 21 Dec 2004  VOL 141 ISS 26
FILE LAST UPDATED: 20 Dec 2004  (20041220/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s l3 and (drug or biomolecule or bioactiv?)
          353 L3
       560379 DRUG
       285940 DRUGS
       705514 DRUG
                (DRUG OR DRUGS)
          437 BIOMOLECULE
         2612 BIOMOLECULES
         3039 BIOMOLECULE
                (BIOMOLECULE OR BIOMOLECULES)
         9048 BIOMOL
         9240 BIOMOLS
        14688 BIOMOL
                (BIOMOL OR BIOMOLS)
        15298 BIOMOLECULE
                (BIOMOLECULE OR BIOMOL)
        31823 BIOACTIV?
L9         53 L3 AND (DRUG OR BIOMOLECULE OR BIOACTIV?)

=> s l9 and (spacer or linker)
        37966 SPACER
        13466 SPACERS
        45416 SPACER
                (SPACER OR SPACERS)
        16480 LINKER
         3896 LINKERS
        18712 LINKER
                (LINKER OR LINKERS)
L10        10 L9 AND (SPACER OR LINKER)

=> dis l10 1-10 bib abs hitstr

L10  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2002:914245  CAPLUS
DN   138:122801
TI   Synthesis of Antisense Oligonucleotides Conjugated to a Multivalent
     Carbohydrate Cluster for Cellular Targeting
AU   Maier, Martin A.; Yannopoulos, Constantin G.; Mohamed, Nazim; Roland,
     Arlene; Fritz, Hans; Mohan, V.; Just, George; Manoharan, Muthiah
CS   Department of Medicinal Chemistry, Isis Pharmaceuticals Inc., Carlsbad,
     CA, 92008, USA
```
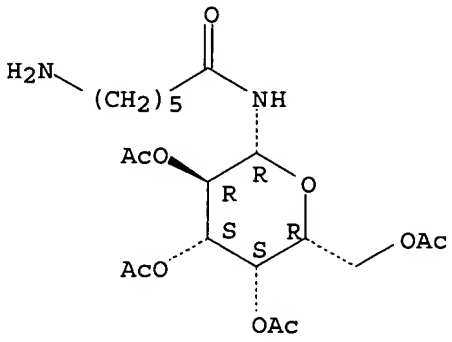
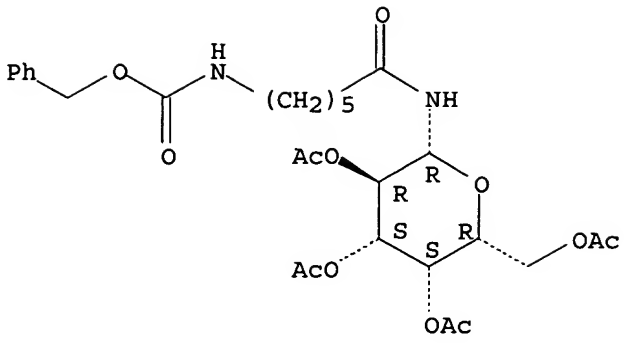

SO Bioconjugate Chemistry (2003), 14(1), 18-29
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
OS CASREACT 138:122801
AB Carrier-mediated delivery holds great promise for significantly improving the cellular uptake and therefore the therapeutic efficacy of antisense oligonucleotides in vivo. A multivalent carbohydrate recognition motif for the asialoglycoprotein receptor has been designed for tissue and cell-specific delivery of antisense **drugs** to parenchymal liver cells. To combine low mol. weight with high receptor affinity, the synthetic ligand contains three galactosyl residues attached to a cholane scaffold via ε-aminocapramide **linkers**. Three-dimensional structural calcns. indicate that this unique design provides proper spacing and orientation of the three galactosyl residues to accomplish high affinity binding to the receptor. Covalent conjugation of the bulky carbohydrate cluster to oligonucleotides has been achieved by solid-phase synthesis using low-loaded macroporous resins and optimized synthesis protocols.
IT **252769-06-5P 252769-08-7P 252769-13-4P**
489459-96-3P 489459-99-6P 489460-03-9P
489460-06-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of antisense oligonucleotides conjugated to multivalent carbohydrate cluster for cellular targeting)
RN 252769-06-5 CAPLUS
CN Hexanamide, 6-amino-N-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 252769-08-7 CAPLUS
CN Carbamic acid, [6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

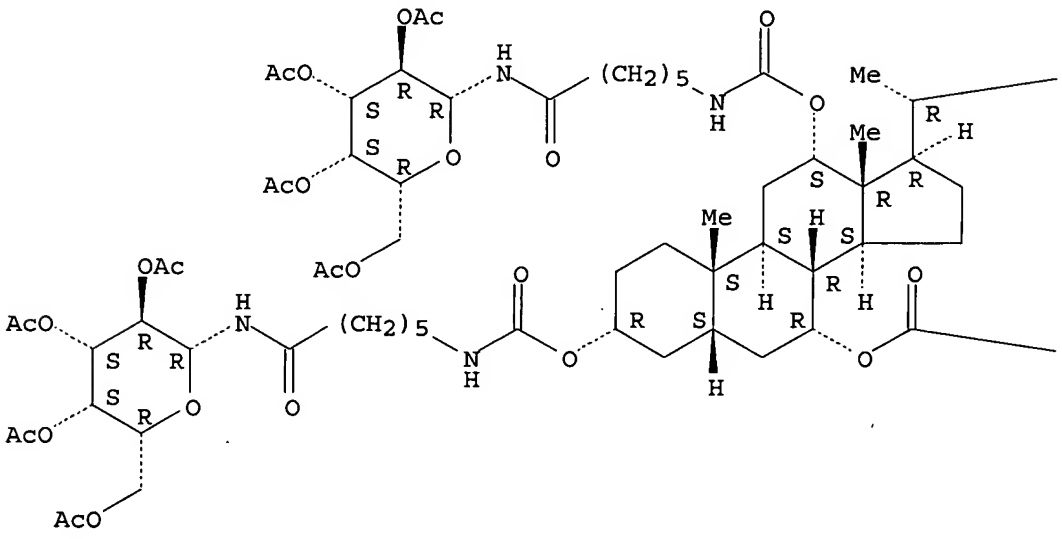
Absolute stereochemistry.

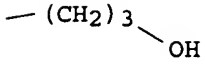


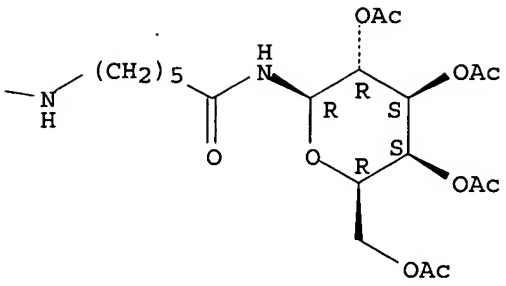
RN 252769-13-4 CAPLUS
CN Cholane-3,7,12,24-tetrol, 3,7,12-tris[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]carbamate], (3α,5β,7α,12α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

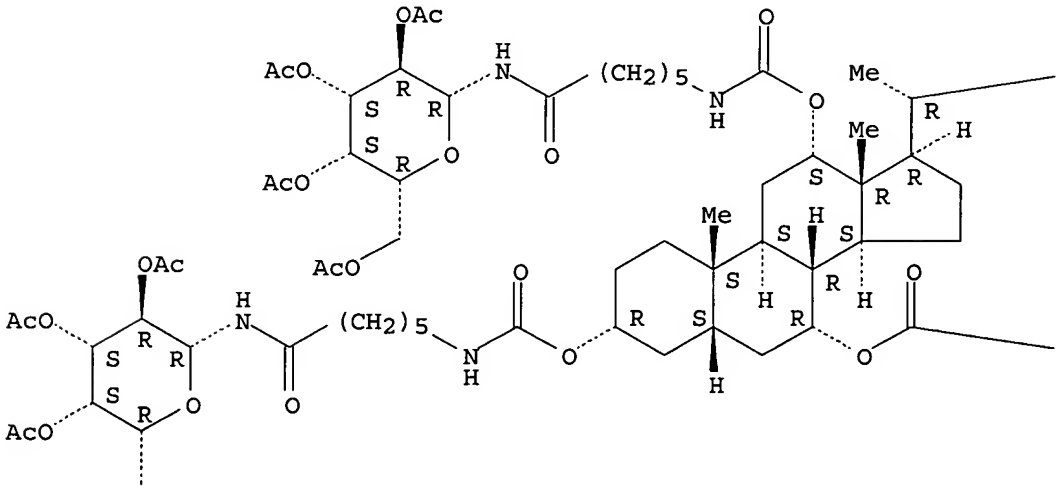




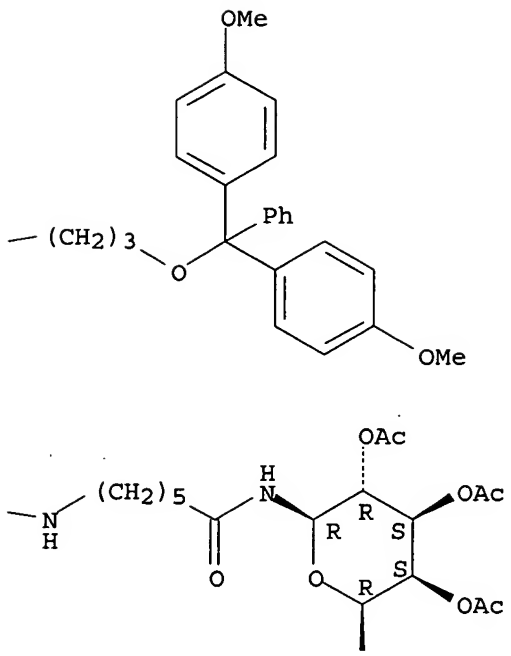


RN 489459-96-3 CAPLUS
CN Cholane-3,7,12-triol, 24-[bis(4-methoxyphenyl)phenylmethoxy]-, tris[6-oxo-6-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]hexyl]carbamate], (3α,5β,7α,12.alpha.)- (9CI) (CA INDEX NAME)

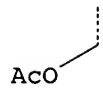
Absolute stereochemistry.



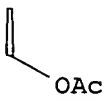
PAGE 1-B



PAGE 2-A



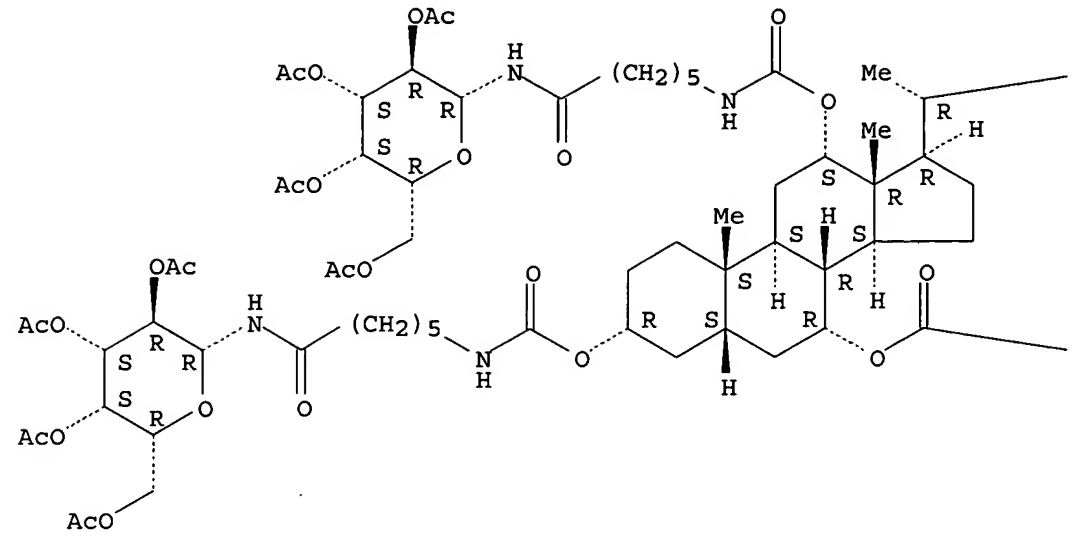
PAGE 2-B



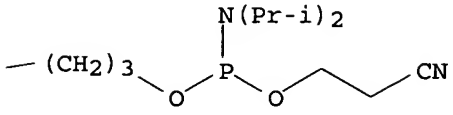
RN 489459-99-6 CAPLUS
CN Cholane-3,7,12-triol, 24-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]-, tris[6-oxo-6-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]carbamate], (3α,5β,7α,12.alpha.)- (9CI) (CA INDEX NAME)

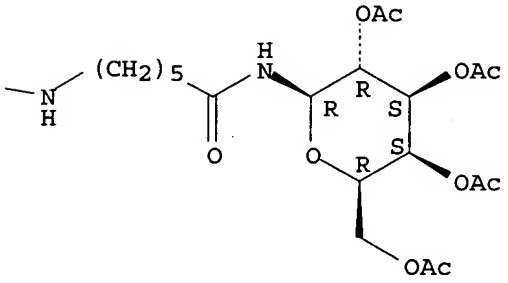
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



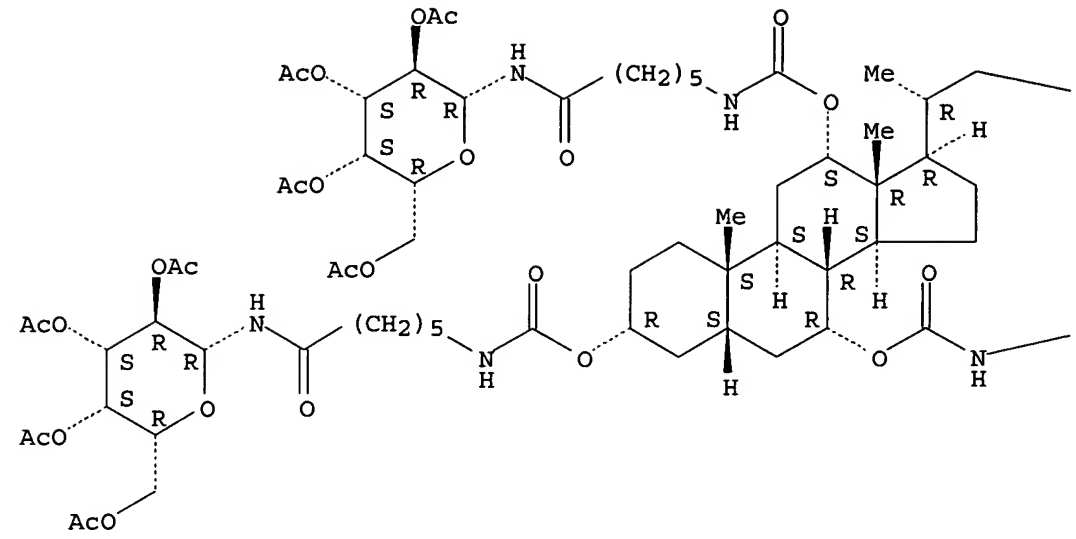


RN 489460-03-9 CAPLUS

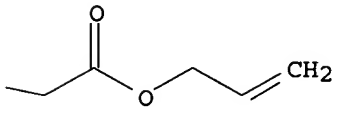
CN Cholan-24-oic acid, 3,7,12-tris[[[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]amino]carbonyl]oxy]-, 2-propenyl ester, (3α,5β,7α,12α)- (9CI) (CA INDEX NAME)

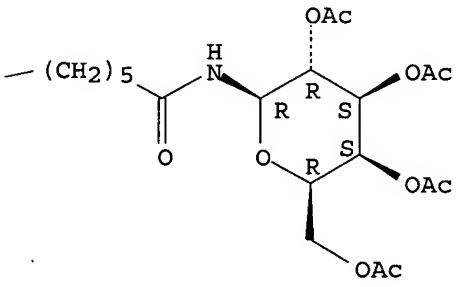
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

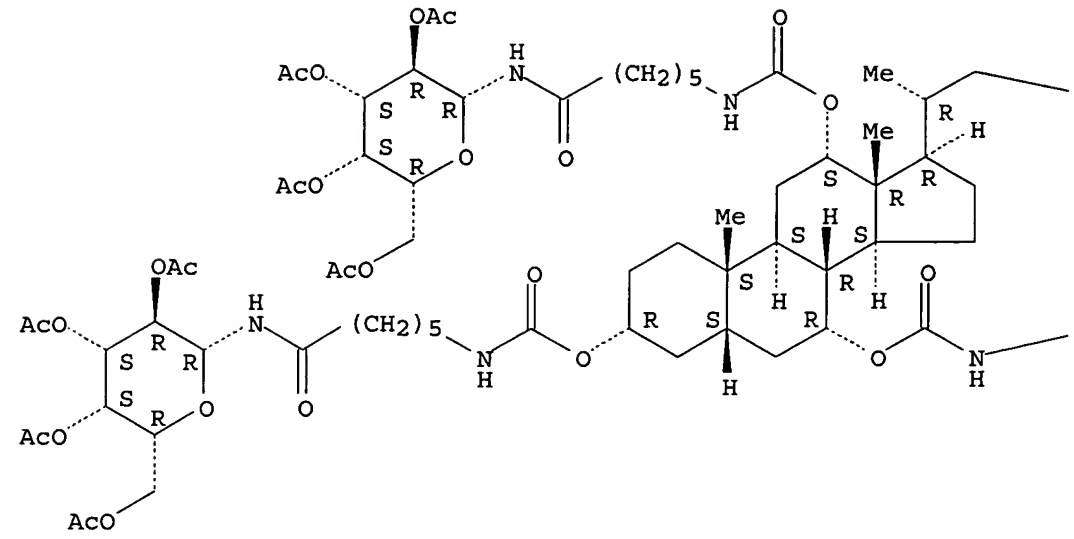




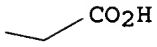
RN 489460-06-2 CAPLUS
CN Cholan-24-oic acid, 3,7,12-tris[[[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]amino]carbonyl]oxy]-, (3α,5β,7α,12α)- (9CI) (CA INDEX NAME)

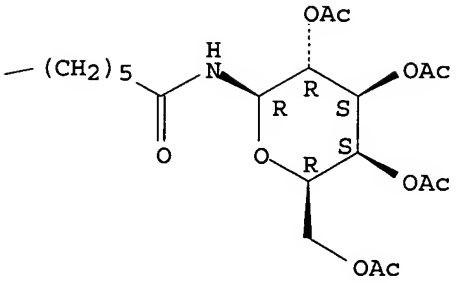
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B





RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:521752 CAPLUS
DN 137:79182
TI Preparation of monosaccharide and oligosaccharide lipo-amino acids as pharmaceutical agents used for oral administration as delivery systems
IN Toth, Istvan; Falconer, Robert
PA Alchemia Pty. Ltd., Australia
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 2002053572	A1	20020711
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM		
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	US 2004176281	A1	20040909
PRAI	GB 2001-115	A	20010104
	WO 2002-AU5	A2	20020103

PI	WO 2002-AU5		20020103
	US 2003-676436		20030630

OS MARPAT 137:79182

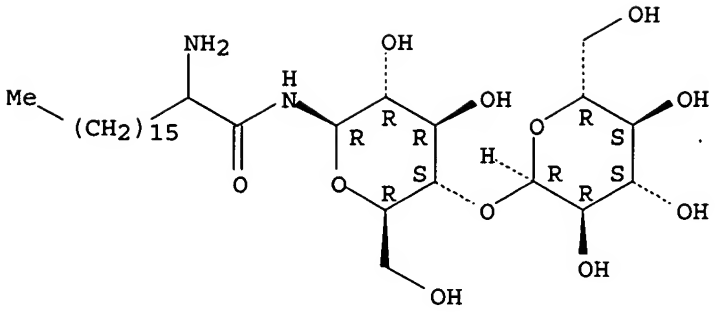
AB The invention relates to compds. r[D(nz)]p[(Wq-S-X-L)(my)] in which D is a therapeutically useful mol.; r is 0, or is an integer greater than or equal to 1; p, n and m may be the same or different, and are independently integers greater than or equal to 1; n and m represent the overall magnitude of the charge on the mols.; and z and y are charges, either pos. (+) or neg. (-), such that when z is pos., y is neg. and vice versa; and [(Wq-S-X-L)(my)] is a carrier compound, in which X is a covalent bond, or is a **linker** group, selected from 2 to 14 atom **spacers**, which may be substituted or unsubstituted, branched or linear; S is a mono- or oligosaccharide; L is a lipidic moiety; W may be absent, or is a 3 to 10 atom alkyl or heteroalkyl **spacer**, which may be branched or linear, and is substituted with one or more functional groups, each of which is charged or is capable of carrying a charge under physiol. conditions; and q is 0 when W is absent, or is an integer, which ranges from 3 to the number of hydroxys available for substitution on the mono- or oligosaccharide., which are useful in the delivery of a wide variety of therapeutically useful mols. In particular, the invention relates to compds. which are able to act as carriers for therapeutically useful mols., and to pharmaceutical agents comprising these carriers. The compds. of the invention comprise a mono- or oligosaccharide, a lipidic moiety, and optionally a **linker** and/or a **spacer**. The pharmaceutical agents of the invention are particularly useful for oral administration. Thus, 2,3,4,6-tetra-O-acetyl-N-[[[2-(R/S)[(tert-butoxycarbonyl)amino]tetradecyl]amino]carbonothioyl]-β-D-glucopyranosylamine was prepared as pharmaceutical agent used for oral administration as **drug** delivery system, (no data). A formulation intended for oral administration to humans may contain about 1 mg to 1 g of an active compound with an appropriate and convenient amount of carrier material, which may vary from about 5 to 95 percent of the total composition Dosage unit forms will generally contain between from about 1 mg to 500 mg of active ingredient.

IT **192385-43-6P 192385-44-7P 441016-31-5P**
441016-32-6P
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of monosaccharide and oligosaccharide lipoamino acids as pharmaceutical agents used for oral administration as delivery systems)

RN 192385-43-6 CAPLUS

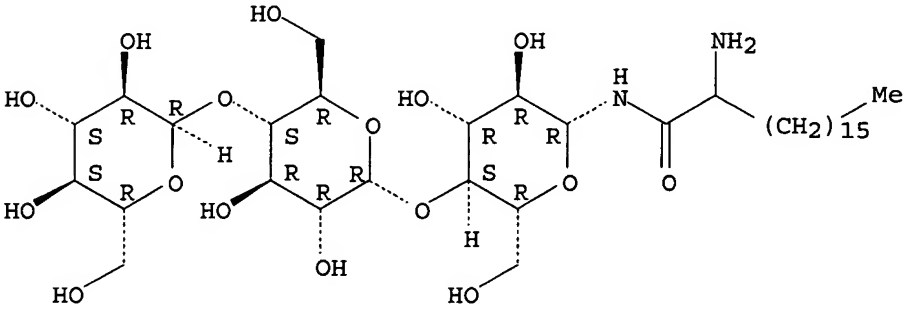
CN Octadecanamide, 2-amino-N-(4-O-α-D-glucopyranosyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



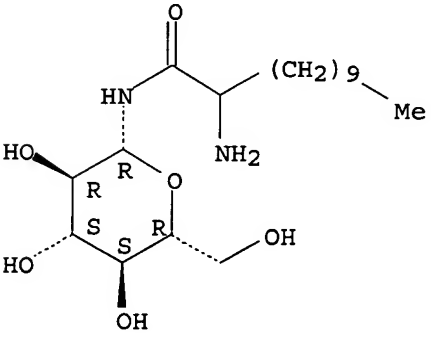
RN 192385-44-7 CAPLUS
CN Octadecanamide, 2-amino-N-(O-α-D-glucopyranosyl-(1→4)-O-α-D-glucopyranosyl-(1→4)-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



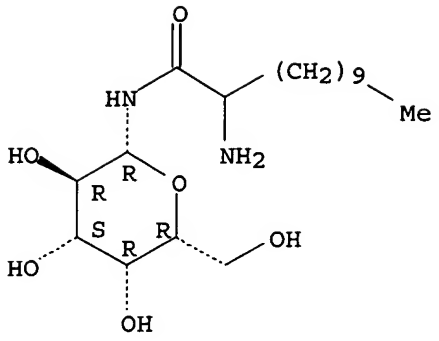
RN 441016-31-5 CAPLUS
CN Dodecanamide, 2-amino-N-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 441016-32-6 CAPLUS
CN Dodecanamide, 2-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

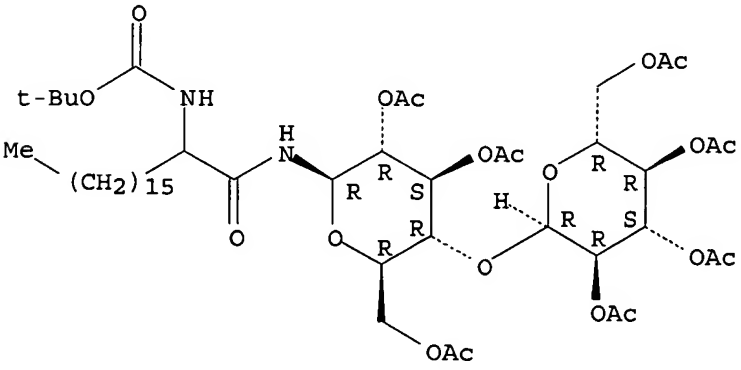


IT **199448-59-4P 199448-61-8P 441016-23-5P**
441016-24-6P 441016-28-0P 441016-29-1P
441016-44-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of monosaccharide and oligosaccharide lipoamino acids as pharmaceutical agents used for oral administration as delivery systems)

RN 199448-59-4 CAPLUS

CN Carbamic acid, [1-[[[2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl)-β-D-glucopyranosyl]amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

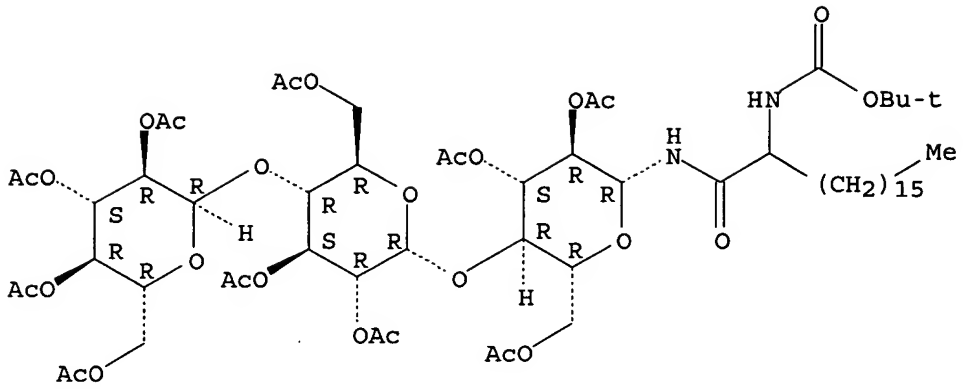
Absolute stereochemistry.



RN 199448-61-8 CAPLUS

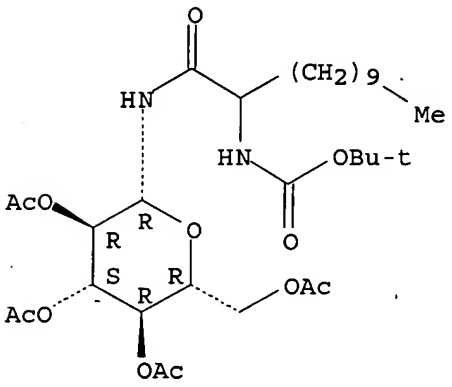
CN Carbamic acid, [1-[[(O-2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl-(1→4)-O-2,3,6-tri-O-acetyl-α-D-glucopyranosyl-(1→4)-2,3,6-tri-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



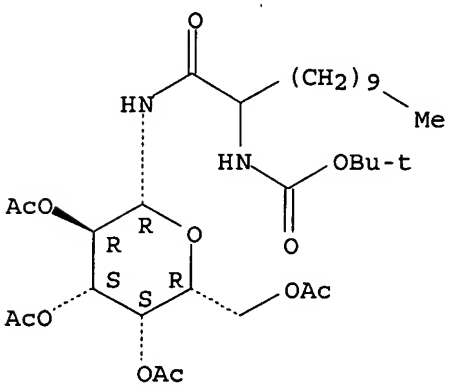
RN 441016-23-5 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]undecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 441016-24-6 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]carbonyl]undecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

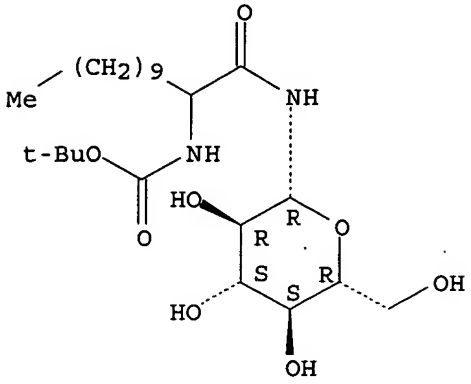
Absolute stereochemistry.



RN 441016-28-0 CAPLUS
CN Carbamic acid, [1-[(β-D-glucopyranosylamino)carbonyl]undecyl]-,

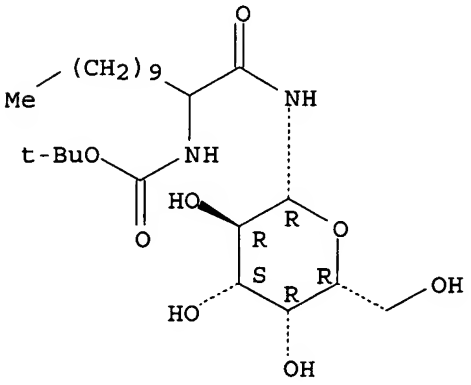
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



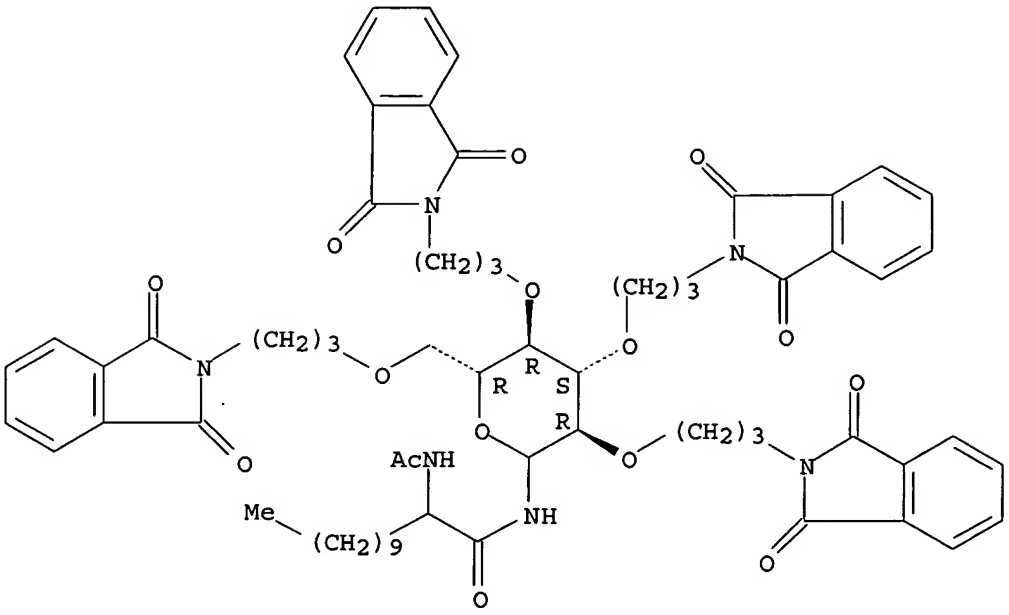
RN 441016-29-1 CAPLUS
CN Carbamic acid, [1-[(β-D-galactopyranosylamino)carbonyl]undecyl]-,
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 441016-44-0 CAPLUS
CN Dodecanamide, 2-(acetylamino)-N-[2,3,4,6-tetrakis-O-[3-(1,3-dihydro-1,3-
dioxo-2H-isoindol-2-yl)propyl]-D-glucopyranosyl]- (9CI) (CA INDEX NAME)

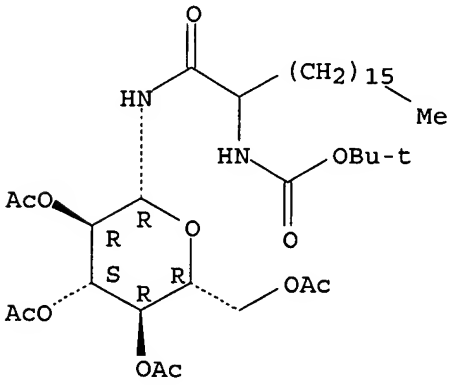
Absolute stereochemistry.



IT **199448-57-2P 215254-45-8P 365441-37-8P 441016-25-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of monosaccharide and oligosaccharide lipoamino acids as pharmaceutical agents used for oral administration as delivery systems)

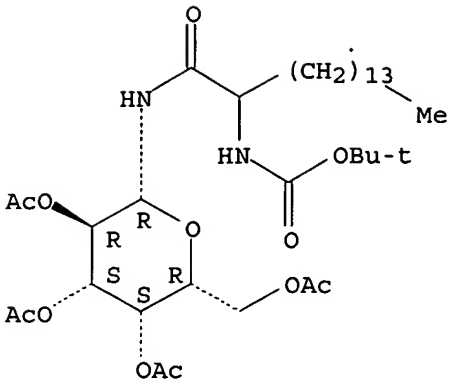
RN 199448-57-2 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



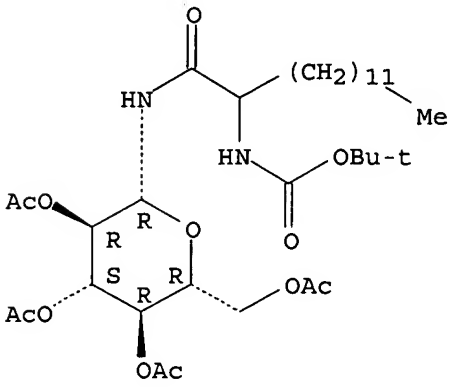
RN 215254-45-8 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]carbonyl]pentadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



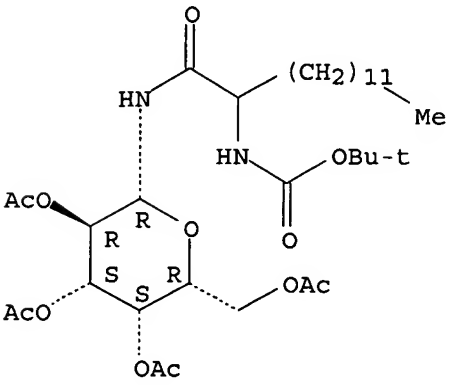
RN 365441-37-8 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]tridecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 441016-25-7 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]carbonyl]tridecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

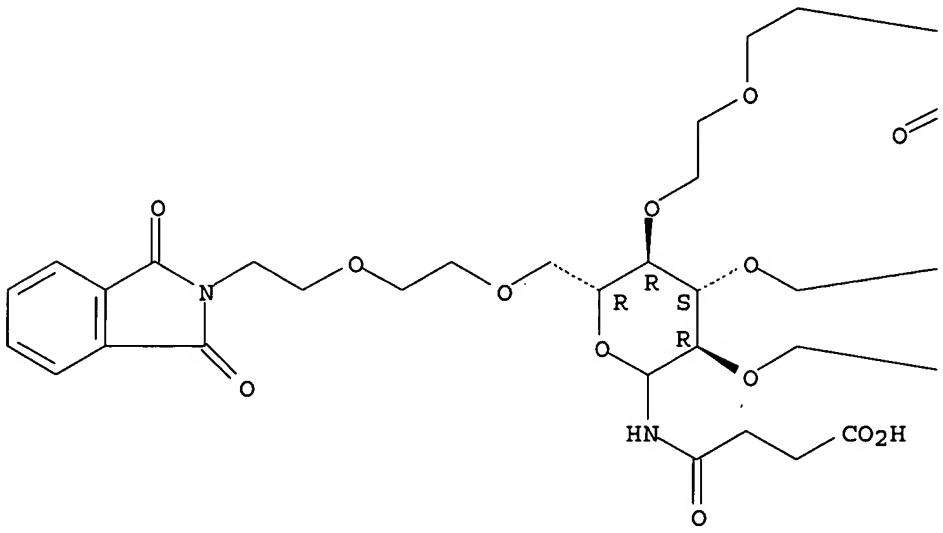


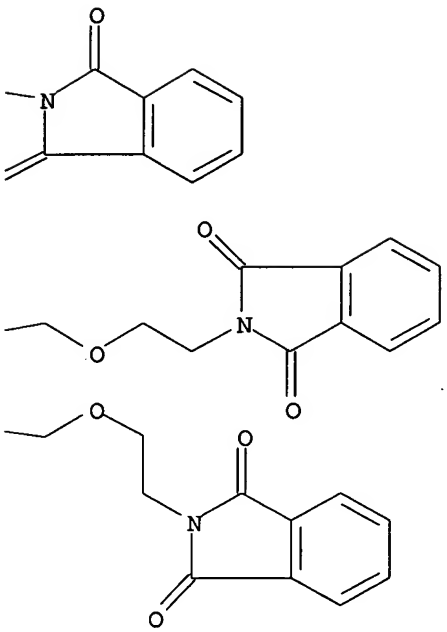
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:509421 CAPLUS
DN 138:358249
TI Towards synthetic vaccines built on carbohydrate cores
AU McGeary, Ross P.; Jablonkai, Istvan; Toth, Istvan
CS School of Pharmacy, The University of Queensland, Brisbane, 4072, Australia
SO Letters in Peptide Science (2002), Volume Date 2001, 8(3-5), 273-276
CODEN: LPSCEM; ISSN: 0929-5666
PB Kluwer Academic Publishers
DT Journal
LA English
AB Lipophilic polyfunctional carbohydrate core/templates have been designed and developed for **drug**/vaccine delivery. Three carbohydrate-based templates containing four protected N-terminal arms were synthesized from glucose and galactose. Me α-D-glucopyranoside was converted to two derivs. bearing a carboxylic acid handle for attachment to solid supports, **spacer** arms of differing hydrophilicity, and phthaloyl-protected amino groups suitable for peptide chain extension. β-D-Galactopyranosyl azide was converted to a template bearing a carboxylic acid handle and four BOC-protected amines. All the templates were found to be suitable for attachment to solid supports and subsequent cleavage from resins, using either BOC- or FMOC-methodologies.
IT **394245-94-4P 394245-96-6P 394245-97-7P**
518307-50-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(towards synthetic vaccines built on carbohydrate cores)
RN 394245-94-4 CAPLUS
CN Butanoic acid, 4-oxo-4-[[2,3,4,6-tetrakis-O-[2-[2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethoxy]ethyl]-D-glucopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

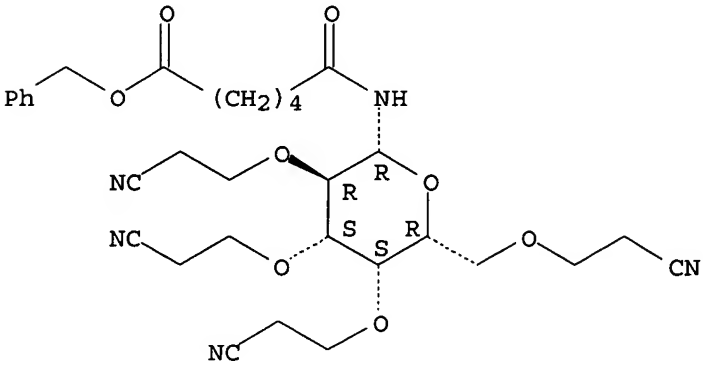
PAGE 1-A





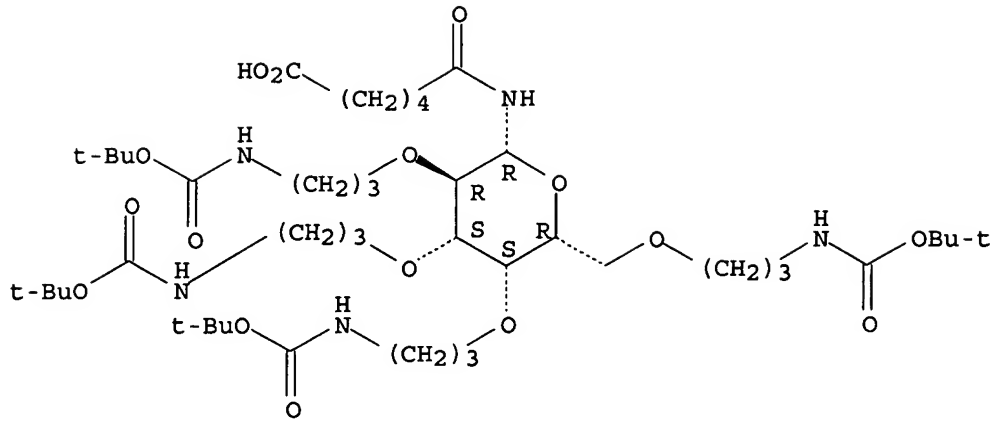
RN 394245-96-6 CAPLUS
CN Hexanoic acid, 6-oxo-6-[[2,3,4,6-tetrakis-O-(2-cyanoethyl)-β-D-galactopyranosyl]amino]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



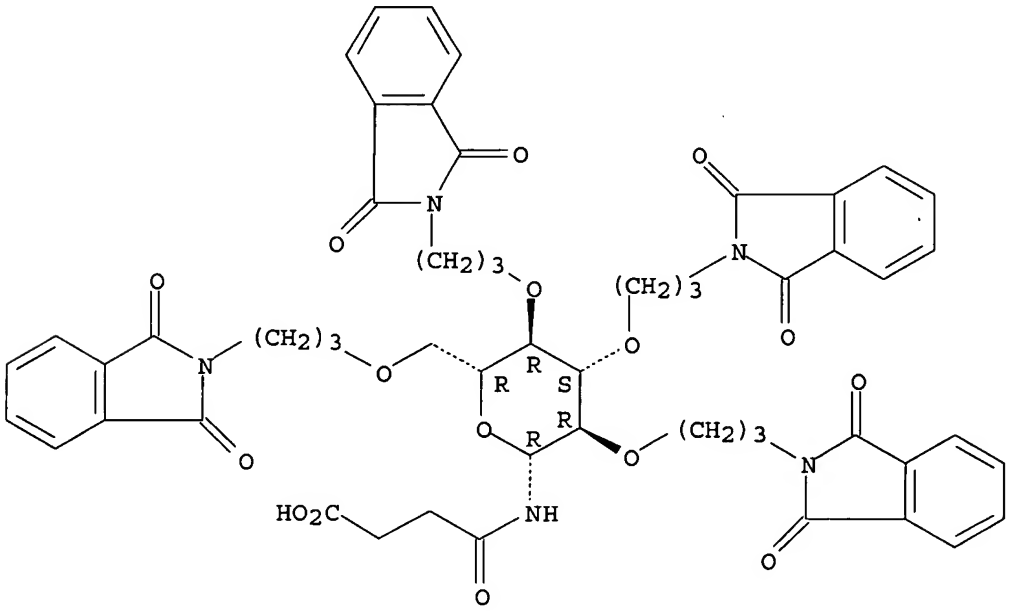
RN 394245-97-7 CAPLUS
CN Hexanoic acid, 6-oxo-6-[[2,3,4,6-tetrakis-O-[3-[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-β-D-galactopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



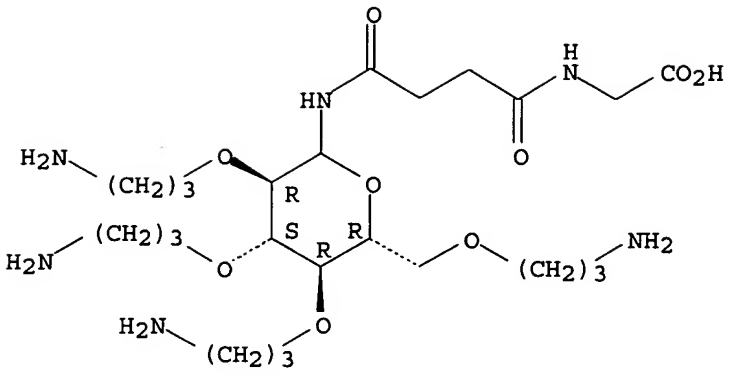
RN 518307-50-1 CAPLUS
CN Butanoic acid, 4-oxo-4-[[2,3,4,6-tetrakis-O-[3-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)propyl]-β-D-glucopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



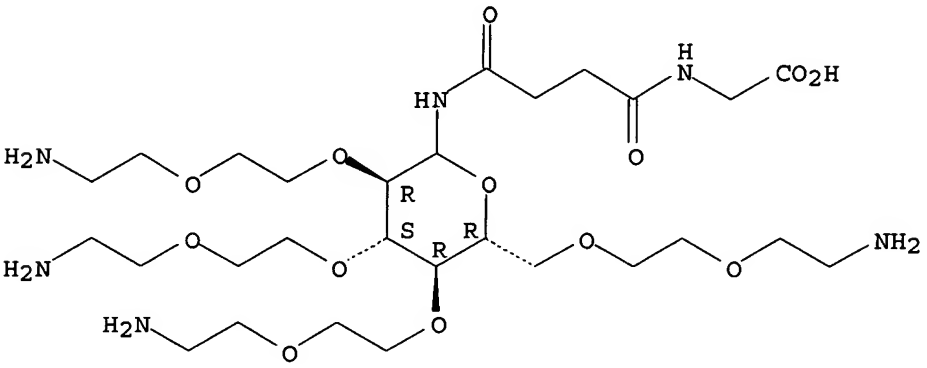
IT **394246-00-5P 394246-01-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(towards synthetic vaccines built on carbohydrate cores)
RN 394246-00-5 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-(3-aminopropyl)-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



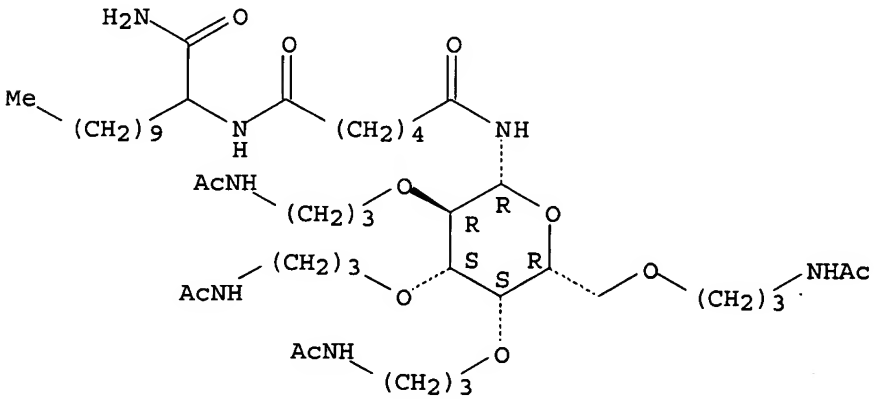
RN 394246-01-6 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-[2-(2-aminoethoxy)ethyl]-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **394246-03-8P**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(towards synthetic vaccines built on carbohydrate cores)
RN 394246-03-8 CAPLUS
CN Hexanediamide, N-[1-(aminocarbonyl)undecyl]-N'-[2,3,4,6-tetrakis-O-[3-(acetylamino)propyl]-β-D-galactopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



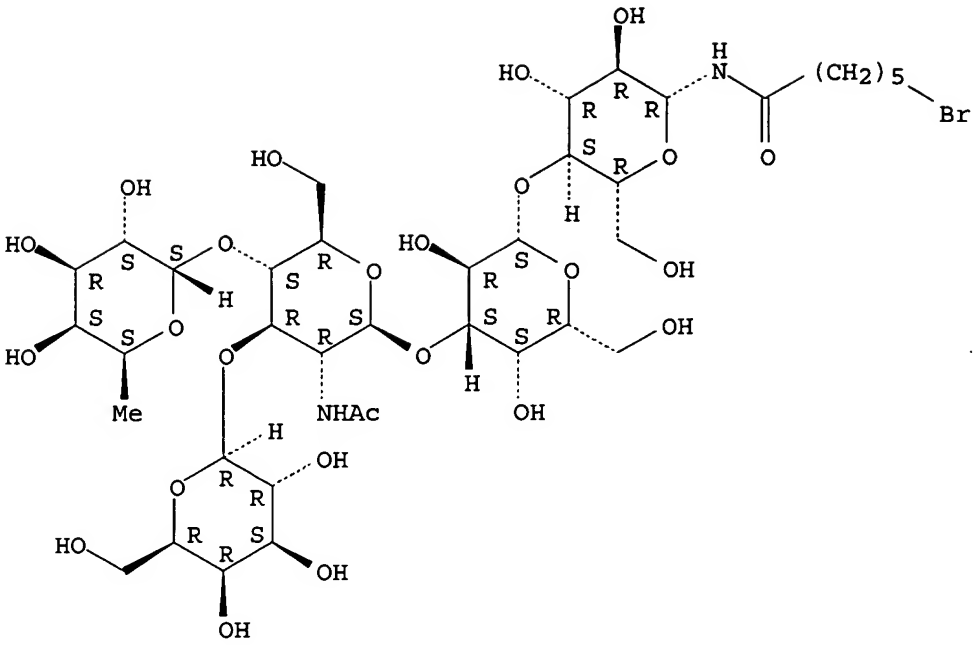
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:502815 CAPLUS
DN 137:77870
TI Vaccine compositions comprising a viral or tumor antigen and a pan DR-binding oligopeptide for inducing humoral immune response against desired determinants
IN Sette, Alessandro; Gaeta, Federico; Grey, Howard M.; Sidney, John; Alexander, Jeffrey L.
PA Epimmune Inc., USA
SO U.S., 43 pp., Cont.-in-part of U.S. 5,736,142.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6413935	B1	20020702	US 1997-788822	19970123
	US 5736142	A	19980407	US 1994-305871	19940914
PRAI	US 1993-121101	B2	19930914		
	US 1994-305871	A2	19940914		
	US 1996-10510P	P	19960124		

AB He present invention provides compns. and methods of inducing immune response in patients. In particular, it provides compns. useful in inducing humoral responses against desired immunogens, particularly polysaccharides. The immunogen is derived from a virus or cancer cell.
IT **194040-04-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(vaccine compns. comprising a viral or tumor antigen and a pan DR-binding oligopeptide for inducing humoral immune response against desired determinants)
RN 194040-04-5 CAPLUS
CN Hexanamide, 6-bromo-N-[O-6-deoxy-α-L-galactopyranosyl-(1→4)-O-[β-D-galactopyranosyl-(1→3)]-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→3)-O-β-D-galactopyranosyl-(1→4)-β-D-glucopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

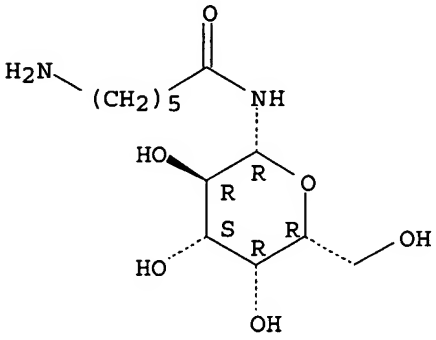


RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:251265 CAPLUS
DN 138:44568
TI Molecular recognition by Kluyveromyces of amphotericin B-loaded, galactose-tagged, poly(lactic acid) microspheres
AU Kassab, Rima; Parrot-Lopez, Helene; Fessi, Hatem; Menaucourt, Jean; Bonaly, Roger; Coulon, Joel
CS UMR 5078 CNRS, Universite Claude Bernard, Villeurbanne, 69622, Fr.
SO Bioorganic & Medicinal Chemistry (2002), 10(6), 1767-1775
CODEN: BMECEP; ISSN: 0968-0896
PB Elsevier Science Ltd.
DT Journal
LA English
AB In an effort to develop a new way of **drug** delivery, especially for polyenic antifungal mols., amphotericin B (AmB) was incorporated into biodegradable galactosylated poly(L-lactic acid) (L-PLA) and poly (L-lactic-co-glycolic acid) (PLGA) microspheres. These **drug** carriers were prepared by solvent evaporation using an oil/water (o/w) emulsion.
The ratio of galactosyl **spacers** with different chain lengths was 1.74-2.78%. The maximal quantity of AmB encapsulated reported to 100 mg of the galactosylated microspheres was 7.14 mg for L-PLA (encapsulation rate 45% of mole) and 6.42 mg for PLGA derivs. (encapsulation rate 81% of mole). In our yeast model, **drug** release depended on three factors: (i) presence of galactosylated antennae, (ii) length of galactosyl antenna and (iii) nature of the polymer. More of the AmB trapped in PLGA microspheres was released than from PLA microspheres. These novel functionalized microspheres could be required for the delivering of therapeutic agents according to their recognition to specific cells.
IT **38822-56-9D**, glycolic-lactic copolymer derivs. **263762-46-5** **263762-47-6** **478826-55-0** **478826-56-1** **478826-57-2**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mol. recognition of amphotericin B-loaded, galactose-tagged, poly(lactic acid) microspheres by Kluyveromyces)

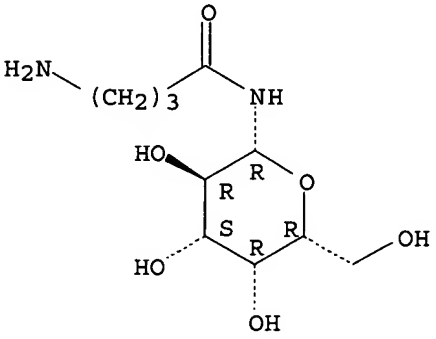
RN 38822-56-9 CAPLUS
CN Hexanamide, 6-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



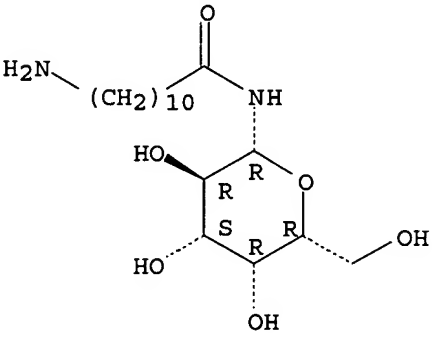
RN 263762-46-5 CAPLUS
CN Butanamide, 4-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

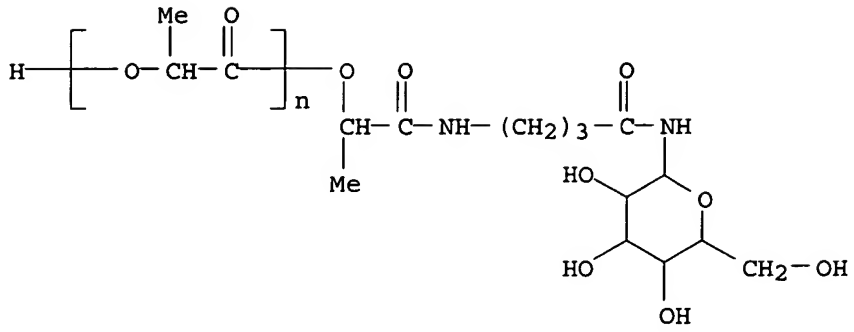


RN 263762-47-6 CAPLUS
CN Undecanamide, 11-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

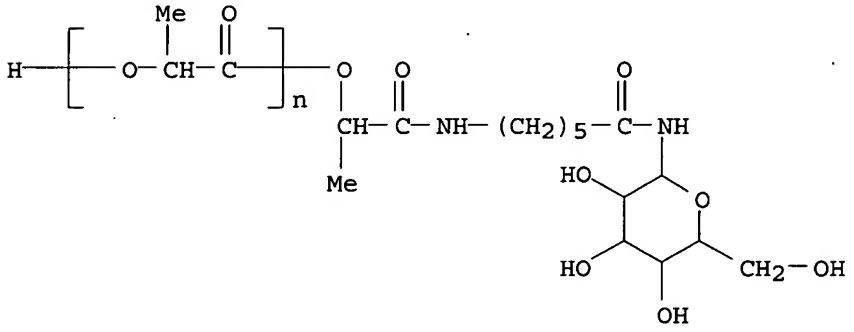
Absolute stereochemistry.



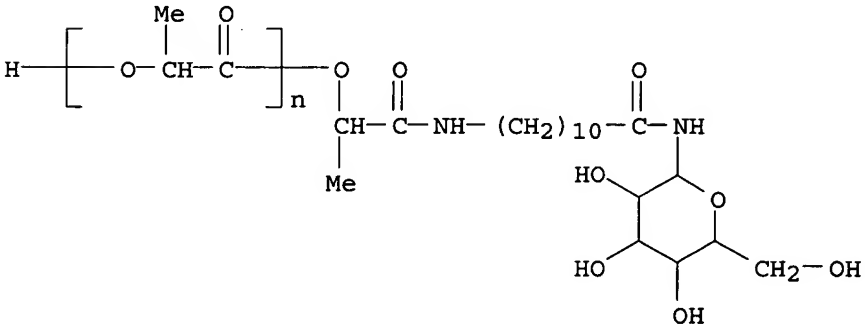
RN 478826-55-0 CAPLUS
CN Poly[oxy[(1S)-1-methyl-2-oxo-1,2-ethanediyl]], α-hydro-ω-[(1S)-2-[[4-(β-D-galactopyranosylamino)-4-oxobutyl]amino]-1-methyl-2-oxoethoxy]- (9CI) (CA INDEX NAME)



RN 478826-56-1 CAPLUS
CN Poly[oxy[(1S)-1-methyl-2-oxo-1,2-ethanediyl]], α-hydro-ω-[(1S)-2-[[6-(β-D-galactopyranosylamino)-6-oxohexyl]amino]-1-methyl-2-oxoethoxy]- (9CI) (CA INDEX NAME)



RN 478826-57-2 CAPLUS
CN Poly[oxy[(1S)-1-methyl-2-oxo-1,2-ethanediyl]], α-hydro-ω-[(1S)-2-[[11-(β-D-galactopyranosylamino)-11-oxoundecyl]amino]-1-methyl-2-oxoethoxy]- (9CI) (CA INDEX NAME)



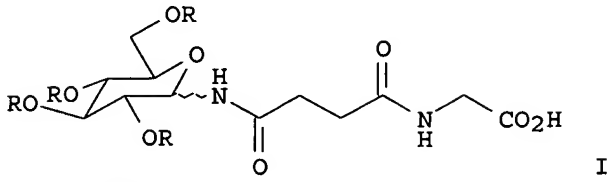
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:749906 CAPLUS
DN 136:151403
TI Carbohydrate-based templates for synthetic vaccines and **drug** delivery
AU McGeary, R. P.; Jablonkai, I.; Toth, I.
CS The University of Queensland, School of Pharmacy, Brisbane, 4072,

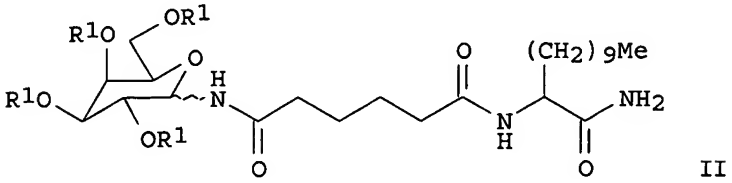
Australia

SO Tetrahedron (2001), 57(41), 8733-8742
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 136:151403

GI



I



II

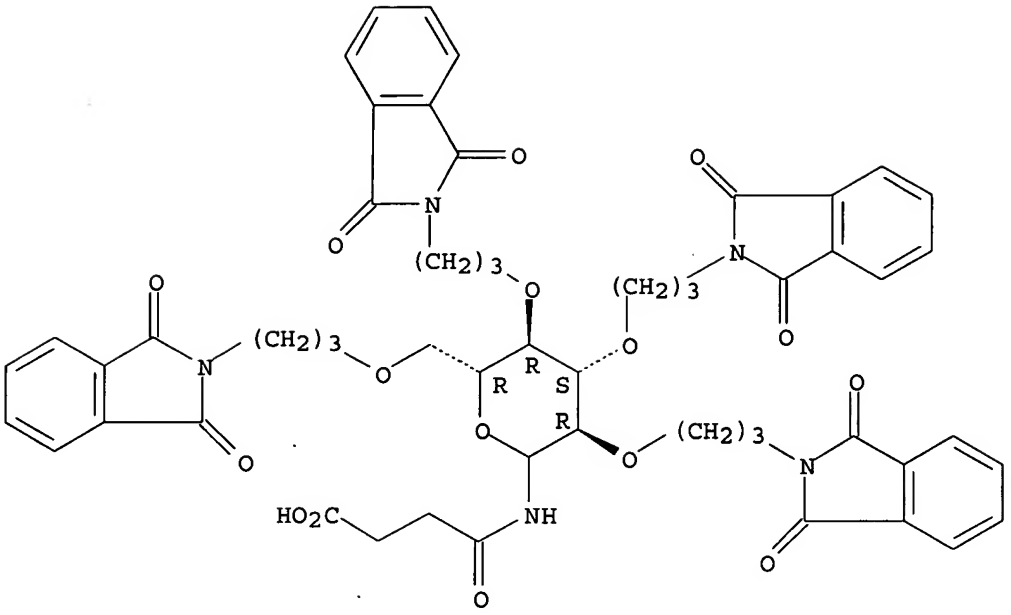
AB Me tetra-O-allyl and tetra-O-[5-(tetrahydro-2H-pyranyloxy)-3-oxapentyl] glucosides, and tetra-O-(cyanoethyl)galactosyl azide were converted into derivs. containing **linkers** with terminal carboxylic acid functionalities at the anomeric position and bearing four arms with phthaloyl- or BOC-protected terminal amino groups. Thus, glucosylamides I [R = (CH2)3NH2, (CH2)2O(CH2)2NH2] and galactosylamides II [R1 = (CH2)3NHCOMe] were obtained as final products. I and II are suitable for use in solid-phase peptide synthesis and for the preparation of dendrimers containing multiple copies of peptides.

IT **394245-88-6P 394245-94-4P 394245-96-6P**
394245-97-7P 394245-98-8DP, resin-bound
394245-99-9DP, resin-bound **394246-02-7DP**, resin-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of carbohydrate-based templates for use in solid-phase peptide synthesis for designing synthetic vaccines and **drug** delivery)

RN 394245-88-6 CAPLUS

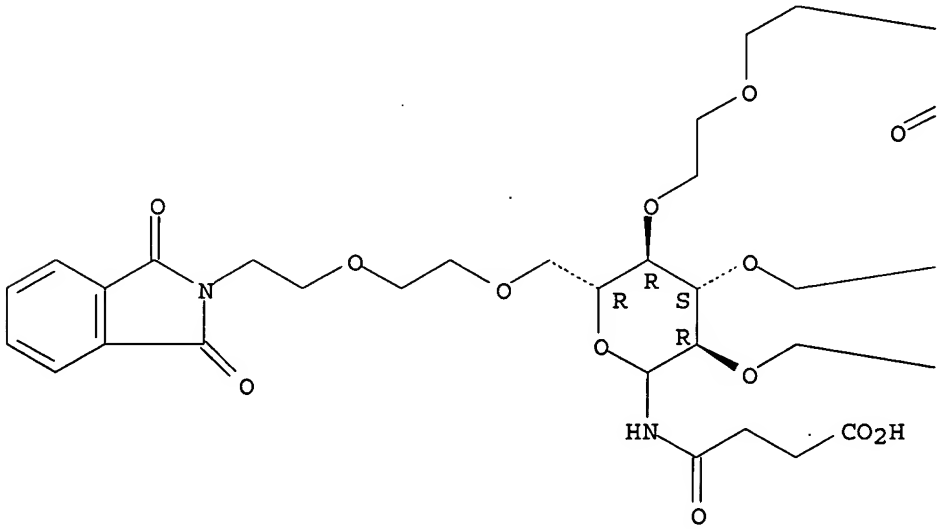
CN Butanoic acid, 4-oxo-4-[[2,3,4,6-tetrakis-O-[3-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)propyl]-D-glucopyranosyl]amino]- (9CI) (CA INDEX NAME)

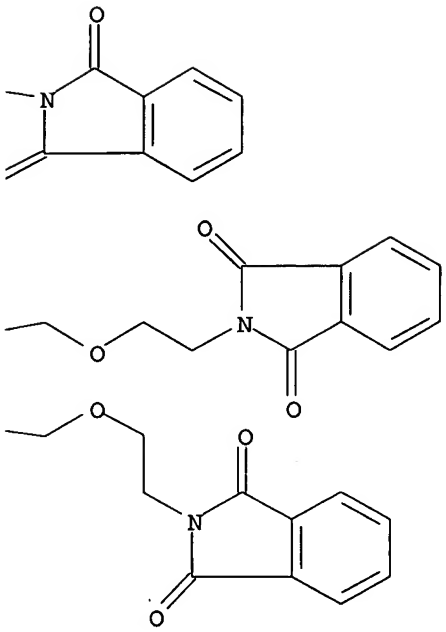
Absolute stereochemistry.



RN 394245-94-4 CAPLUS
CN Butanoic acid, 4-oxo-4-[[2,3,4,6-tetrakis-O-[2-[2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethoxy]ethyl]-D-glucopyranosyl]amino]- (9CI) (CA INDEX NAME)

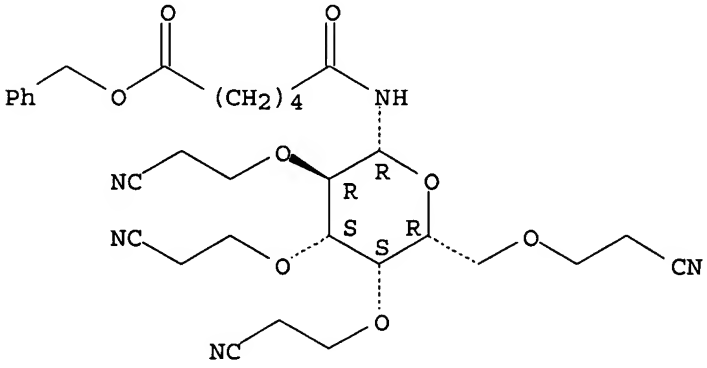
Absolute stereochemistry.





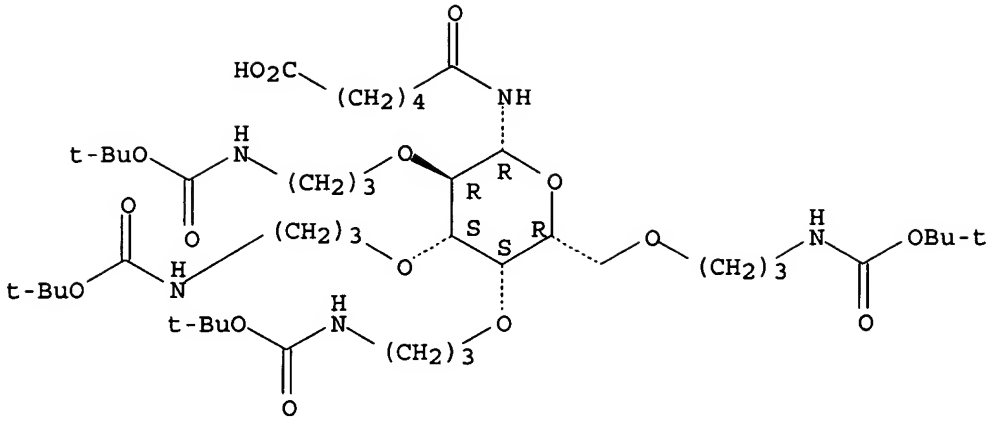
RN 394245-96-6 CAPLUS
CN Hexanoic acid, 6-oxo-6-[[2,3,4,6-tetrakis-O-(2-cyanoethyl)-β-D-galactopyranosyl]amino]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



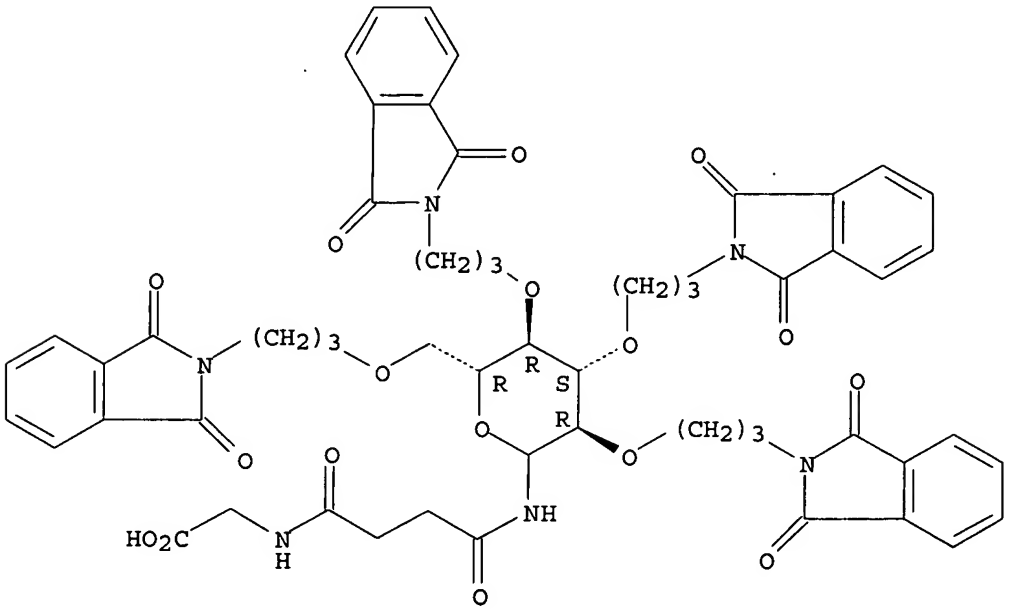
RN 394245-97-7 CAPLUS
CN Hexanoic acid, 6-oxo-6-[[2,3,4,6-tetrakis-O-[3-[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-β-D-galactopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 394245-98-8 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-[3-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)propyl]-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

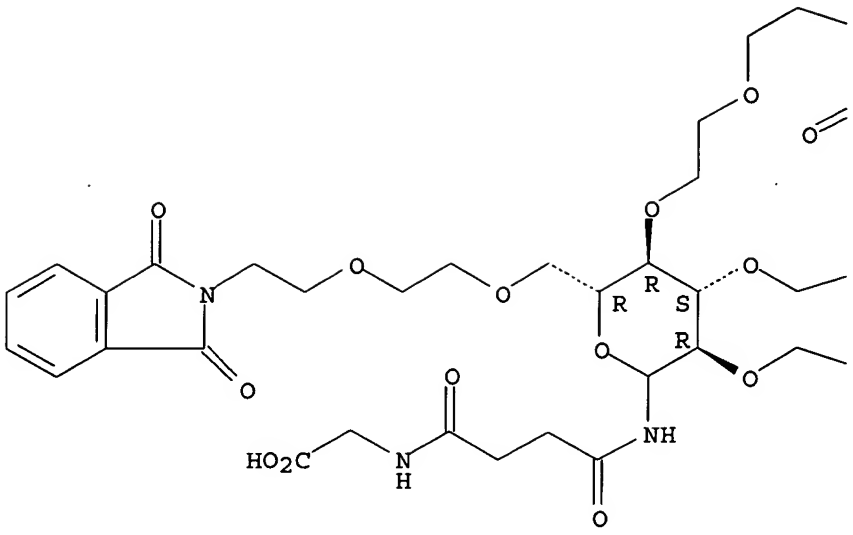
Absolute stereochemistry.



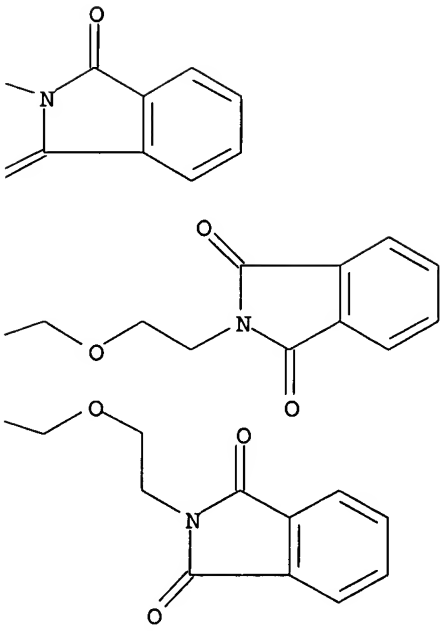
RN 394245-99-9 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-[2-[2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethoxy]ethyl]-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

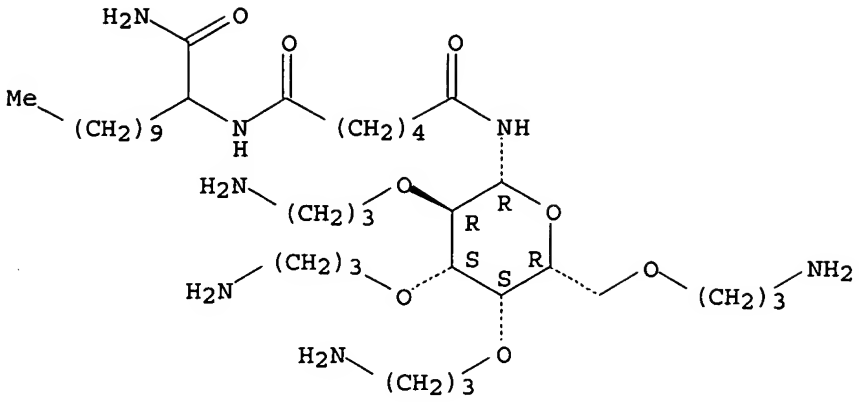


PAGE 1-B



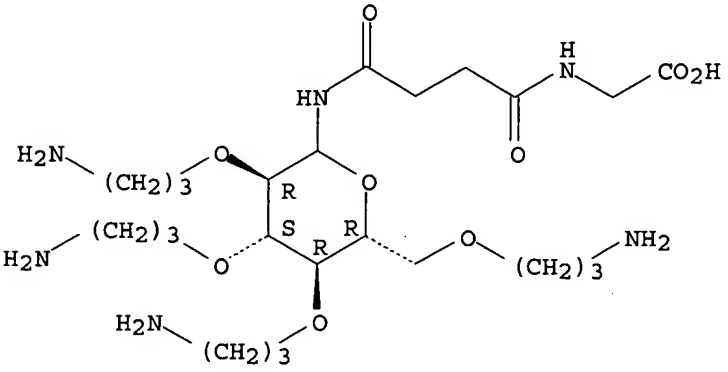
RN 394246-02-7 CAPLUS
CN Hexanediamide, N-[1-(aminocarbonyl)undecyl]-N'-[2,3,4,6-tetrakis-O-(3-aminopropyl)-β-D-galactopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



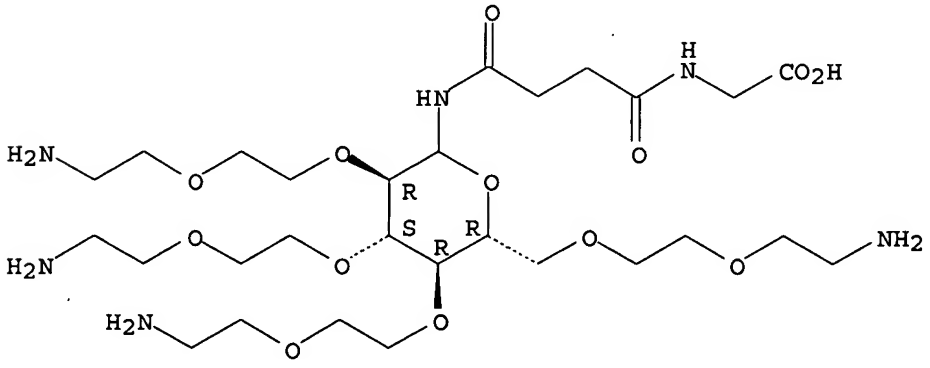
IT **394246-00-5P 394246-01-6P 394246-03-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of carbohydrate-based templates for use in solid-phase peptide synthesis for designing synthetic vaccines and **drug** delivery)
RN 394246-00-5 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-(3-aminopropyl)-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 394246-01-6 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-[2-(2-aminoethoxy)ethyl]-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

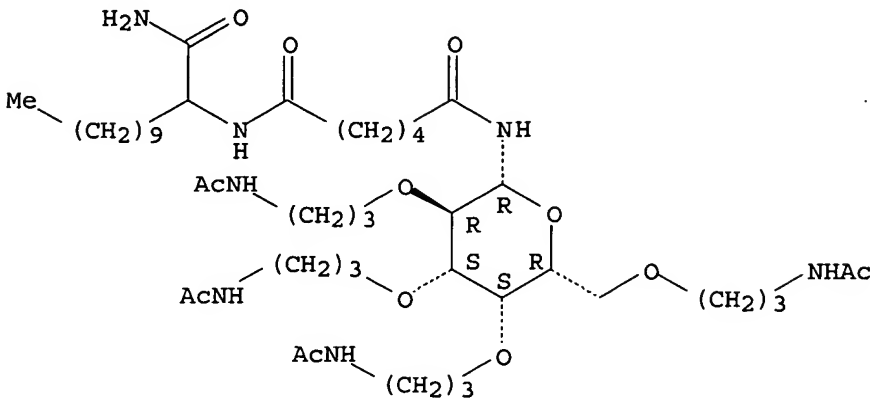
Absolute stereochemistry.



RN 394246-03-8 CAPLUS
CN Hexanediamide, N-[1-(aminocarbonyl)undecyl]-N'-[2,3,4,6-tetrakis-O-[3-

(acetylamino)propyl]-β-D-galactopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

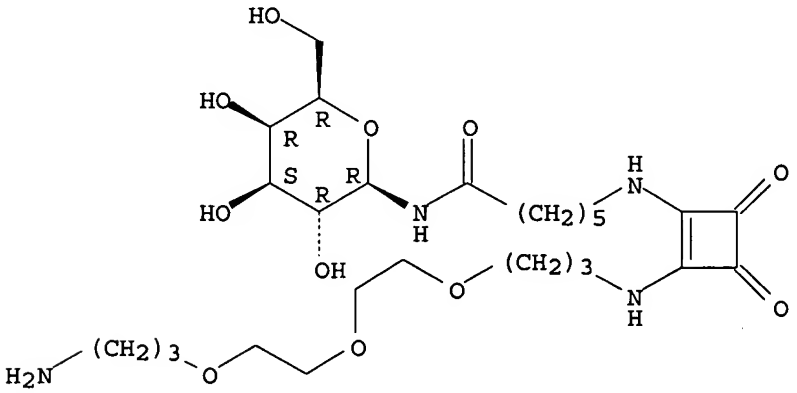


RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:142691 CAPLUS
DN 132:302964
TI High-Affinity Pentavalent Ligands of Escherichia coli Heat-Labile Enterotoxin by Modular Structure-Based Design
AU Fan, Erkang; Zhang, Zhongsheng; Minke, Wendy E.; Hou, Zheng; Verlinde, Christophe L. M. J.; Hol, Wim G. J.
CS Department of Biological Structure Biomolecular Structure Center and Howard Hughes Medical Institute, University of Washington, Seattle, WA, 98195, USA
SO Journal of the American Chemical Society (2000), 122(11), 2663-2664
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB The authors present a novel approach toward high-affinity multivalent ligands: a modular design that incorporates structural information of the multiple target sites. Their work focuses on an ideal target model, the heat-labile enterotoxin (LT) from Escherichia coli. The authors demonstrate the power of a modular synthesis procedure which allowed them to explore in detail the effects of **linker** length on affinity. For the core, they chose acylated pentacyclen. Force-field calcns. show that this mol. can adopt a conformation close to 5-fold symmetry. The authors used 1-β-amidated D-galactose as the finger. D-galactose is a terminal sugar unit of LT's natural receptor GM1. It interacts very specifically with the toxin via defined hydrogen bonds and a carbohydrate against tryptophan stacking. The authors have chosen to span a large range of **linker** lengths using the com. available 4,7,10-trioxa-1,13-tridecanediamine as the basic unit of the **linkers**. After obtaining a series of pentavalent ligands with various **linker** lengths, the authors tested their ability to inhibit the binding of LT B pentamer (LT-B5) to ganglioside using an ELISA protocol. The results clearly show that the structure-based design of pentavalent ligands leads to very significant affinity gains compared to the monovalent ligand. The best pentavalent ligand shows an IC50 that is 105-fold better than galactose, the mol. moiety mostly responsible for the affinity of the authors fingers to LT. In summary, the authors modular approach has allowed for efficient synthesis of large mol. weight protein ligands and, for the first time, a systematic study of the effects of flexible-**linker** lengths on the affinities of multivalent ligands.

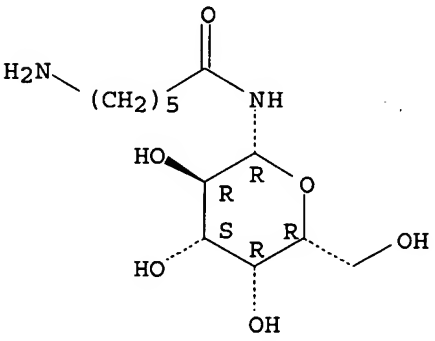
IT **266000-46-8P**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(high-affinity pentavalent ligands of Escherichia coli heat-labile enterotoxin by modular structure-based design using acylated pentacyclen as the core and galactose as the finger)
RN 266000-46-8 CAPLUS
CN Hexanamide, 6-[[2-[[3-[2-[2-(3-aminopropoxy)ethoxy]ethoxy]propyl]amino]-3,4-dioxo-1-cyclobuten-1-yl]amino]-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



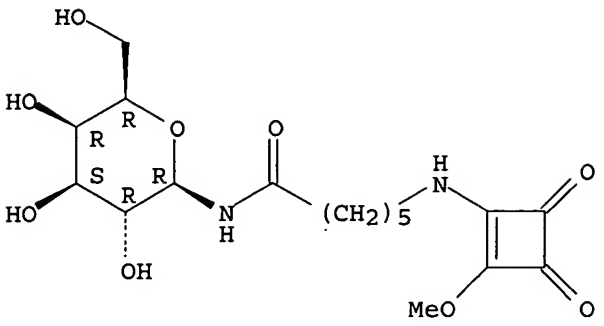
IT **38822-56-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(high-affinity pentavalent ligands of Escherichia coli heat-labile enterotoxin by modular structure-based design using acylated pentacyclen as the core and galactose as the finger)
RN 38822-56-9 CAPLUS
CN Hexanamide, 6-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **266000-50-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(high-affinity pentavalent ligands of Escherichia coli heat-labile enterotoxin by modular structure-based design using acylated pentacyclen as the core and galactose as the finger)
RN 266000-50-4 CAPLUS
CN Hexanamide, N-β-D-galactopyranosyl-6-[(2-methoxy-3,4-dioxo-1-cyclobuten-1-yl)amino]- (9CI) (CA INDEX NAME)

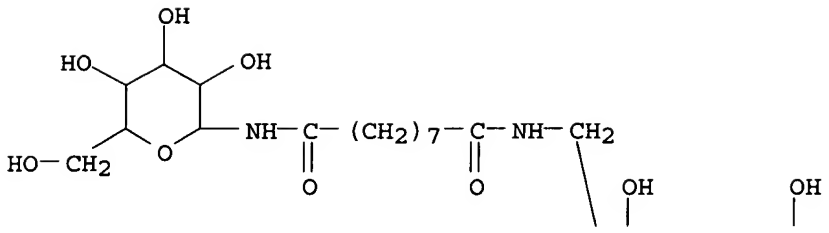
Absolute stereochemistry.



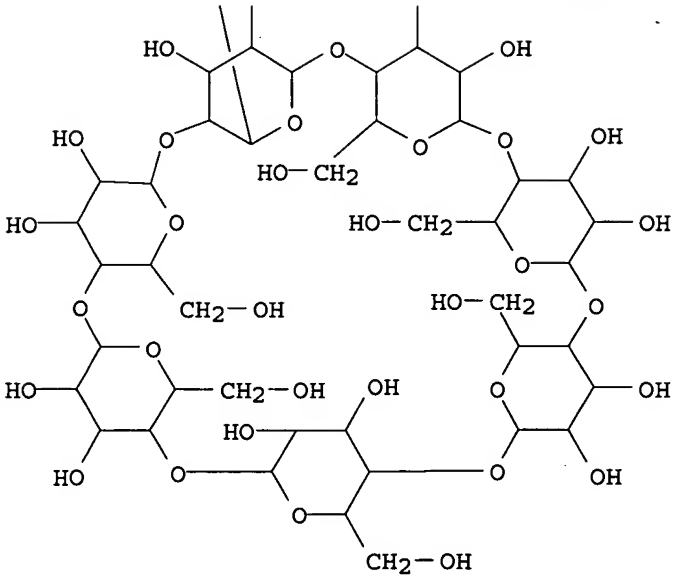
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1995:752253 CAPLUS
DN 123:218332
TI Reduction of the hemolytic effect in a biologically recognizable β-cyclodextrin
AU Leray, E.; Leroy-Lechat, F.; Parrot-Lopez, H.; Duchene, D.
CS 1"Groupe Cyclodextrines Amphiphiles", BIOCIS, Villeurbanne, FG9622, Fr.
SO Supramolecular Chemistry (1995), 5(2), 149-51
CODEN: SCHEER; ISSN: 1061-0278
PB Gordon & Breach
DT Journal
LA English
AB β-Cyclodextrin derivs. having azido, amino and **bioactive** galactosylamido **spacer** functions were tested for hemolytic effect and compared with that of hydroxypropyl-β-cyclodextrin. The cyclodextrin coupled to the **bioactive** saccharide galactose via a **spacer** and which has bio-recognition properties for cell-wall lectin shows an extremely reduced hemolytic effect.
IT **156769-72-1**
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(reduction of the hemolytic effect of β-cyclodextrin derivs.)
RN 156769-72-1 CAPLUS
CN β-Cyclodextrin, 6A-deoxy-6A-[[9-(β-D-galactopyranosylamino)-1,9-dioxononyl]amino]- (9CI) (CA INDEX NAME)

PAGE 1-A

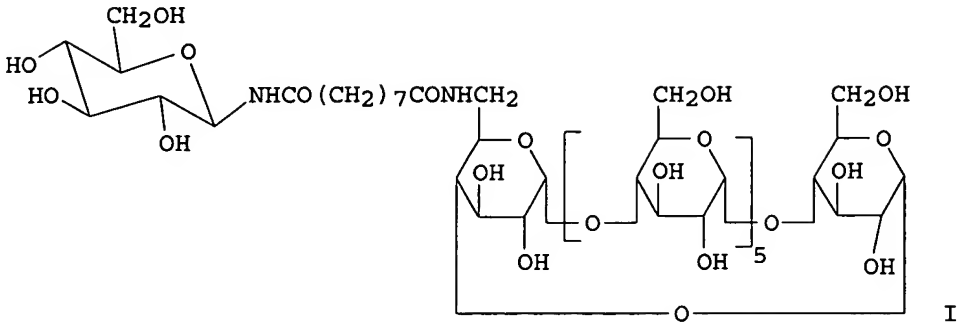


PAGE 2-A



L10 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:152238 CAPLUS
DN 116:152238
TI Vectorized transport of **drugs**: synthesis of a new glycosyl derivative of β-cyclodextrin
AU Parrot-Lopez, Helene; Galons, Herve; Coleman, Anthony W.; Mahuteau, Jacqueline; Miocque, Marcel
CS Fac. Pharm., Univ. Rene Descartes, Paris, 75270, Fr.
SO Tetrahedron Letters (1992), 33(2), 209-12

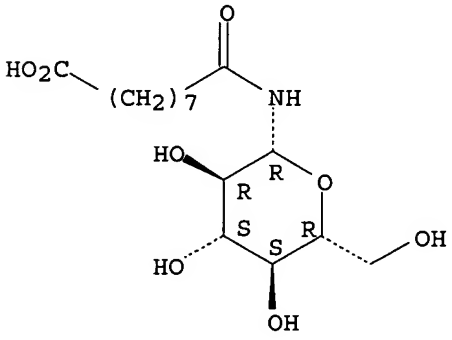
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
OS CASREACT 116:152238
GI



AB Monosubstitution at the O-6 position of β-cyclodextrin by a β-N-glucosyl residue was achieved with a C9 diamide **spacer** as the interglycosidic linkage. The new glycosyl derivative I is much more soluble (200 g/L) in water but retains the capacity to include and to enhance the solubility of pharmacol. active mols.

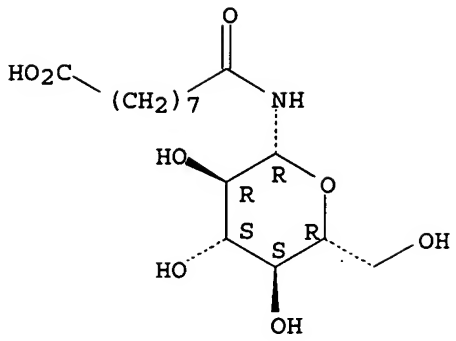
IT **139903-53-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and amidation of, with aminocyclodextrin)
RN 139903-53-0 CAPLUS
CN Nonanoic acid, 9-(β-D-glucopyranosylamino)-9-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **139889-11-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and neutralization of)
RN 139889-11-5 CAPLUS
CN Nonanoic acid, 9-(β-D-glucopyranosylamino)-9-oxo-, monosodium salt (9CI) (CA INDEX NAME)

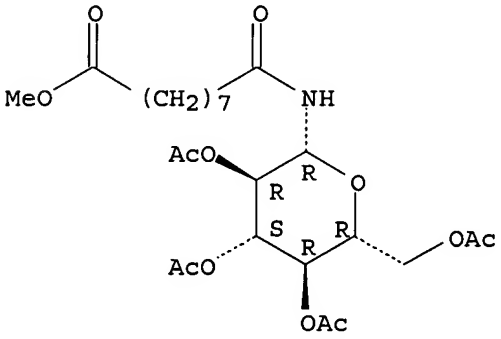
Absolute stereochemistry.



● Na

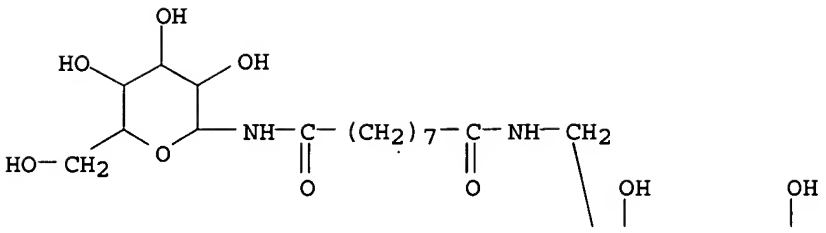
IT **139903-52-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, deacetylation, and hydrolysis of)
RN 139903-52-9 CAPLUS
CN Nonanoic acid, 9-oxo-9-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

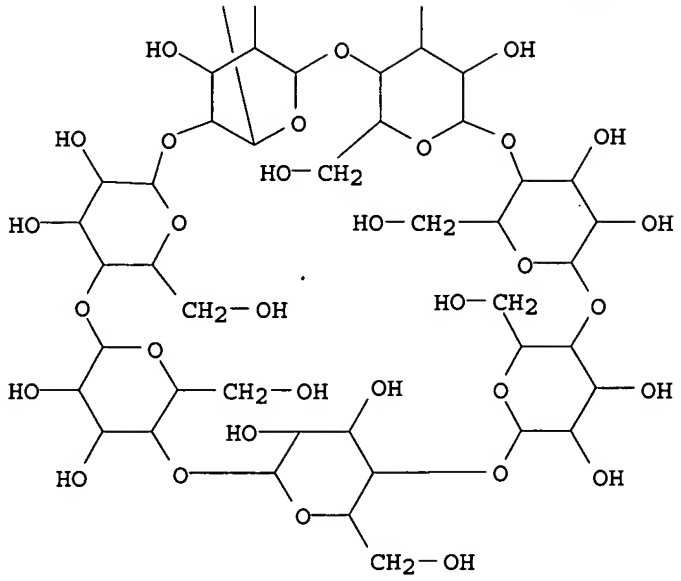


IT **139921-46-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, solubility, and inclusion reaction of, with nicardipine)
RN 139921-46-3 CAPLUS
CN β-Cyclodextrin, 6A-deoxy-6A-[[9-(β-D-glucopyranosylamino)-1,9-dioxononyl]amino]- (9CI) (CA INDEX NAME)

PAGE 1-A

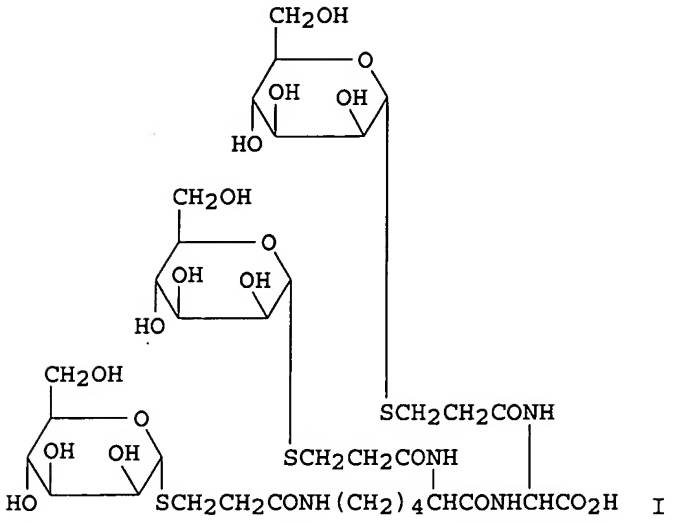


PAGE 2-A



L10 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1981:609468 CAPLUS
DN 95:209468
TI Cell-specific ligands for selective **drug** delivery to tissues and organs
AU Ponpipom, Mitree M.; Bugianesi, Robert L.; Robbins, James C.; Doebber, T. W.; Shen, T. Y.
CS Merck Sharp and Dohme Res. Lab., Rahway, NJ, 07065, USA
SO Journal of Medicinal Chemistry (1981), 24(12), 1388-95

CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
GI

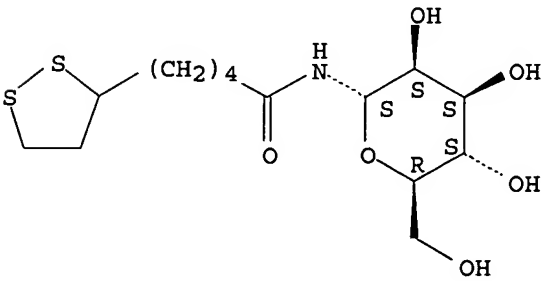


I

AB Various nos. of D-mannose residues were attached via **spacer** arms to lysine, dilysine, and oligolysine backbones. These D-mannosyl peptide analogs were potent competitive inhibitors of the uptake of 125I-labeled D-mannose-bovine serum albumin conjugates by rat alveolar macrophages. The inhibitory potency of these synthetic ligands increased with increasing number of carbohydrate moieties. The chirality of the peptide backbone did not play a major role in binding, whereas variations of the length and linkage of the **spacer** arm affected the inhibitory activities. The saccharide specificity of the macrophage receptor was demonstrated by the inactivity of corresponding D-galactosyl peptide analogs. A L-fucosyl peptide derivative was only weakly active. The trimannosyldi-L-lysine ligand (I) [79390-81-1] (KI = 3.9 μM) and its analogs are potentially useful in selective delivery of therapeutic agents to macrophages.

IT **79360-23-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymerization of)
RN 79360-23-9 CAPLUS
CN 1,2-Dithiolane-3-pentanamide, N-α-D-mannopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



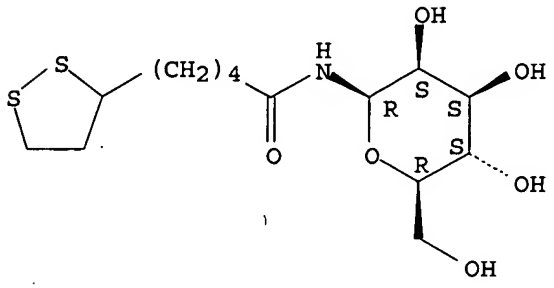
IT **79375-79-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and macrophage binding by)
RN 79375-79-4 CAPLUS
CN 1,2-Dithiolane-3-pentanamide, N-β-D-mannopyranosyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 74761-63-0
CMF C14 H25 N O6 S2

Absolute stereochemistry.



=> dis hist

(FILE 'HOME' ENTERED AT 14:12:19 ON 21 DEC 2004)

FILE 'REGISTRY' ENTERED AT 14:12:28 ON 21 DEC 2004
L1 STRUCTURE UPLOADED
L2 50 S L1 SSS SAM
L3 1100 S L1 SSS FULL
L4 0 S L3 AND (DRUG OR BIOMOLECULE OR BIOACTIVE?)
L5 0 S L3 AND (DRUG OR BIOACTIVE)
L6 0 S L3 AND DRUG
L7 0 S L3 AND (SPACER OR LINKER OR LIPID? OR GLYCEROL)
L8 0 S L3 AND CONJUGATE

FILE 'CAPLUS' ENTERED AT 14:16:45 ON 21 DEC 2004
L9 53 S L3 AND (DRUG OR BIOMOLECULE OR BIOACTIV?)
L10 10 S L9 AND (SPACER OR LINKER)

```
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LOGINID:ssspta1623kxg

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2


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 NEWS  1           Web Page URLs for STN Seminar Schedule - N. America
 NEWS  2           "Ask CAS" for self-help around the clock
 NEWS  3  SEP 01   New pricing for the Save Answers for SciFinder Wizard within
                   STN Express with Discover!
 NEWS  4  OCT 28   KOREAPAT now available on STN
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 NEWS  6  DEC 01   LISA now available on STN
 NEWS  7  DEC 09   12 databases to be removed from STN on December 31, 2004
 NEWS  8  DEC 15   MEDLINE update schedule for December 2004
 NEWS  9  DEC 17   ELCOM reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  10 DEC 17   COMPUAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  11 DEC 17   SOLIDSTATE reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  12 DEC 17   CERAB reloaded; updating to resume; current-awareness
                   alerts (SDIs) affected
 NEWS  13 DEC 17   THREE NEW FIELDS ADDED TO IFIPAT/IFIUDB/IFICDB

 NEWS EXPRESS  OCTOBER 29 CURRENT WINDOWS VERSION IS V7.01A, CURRENT
               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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FILE 'HOME' ENTERED AT 13:53:10 ON 21 DEC 2004

=> file reg
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'REGISTRY' ENTERED AT 13:53:20 ON 21 DEC 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
```

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9
DICTIONARY FILE UPDATES: 20 DEC 2004 HIGHEST RN 800365-77-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

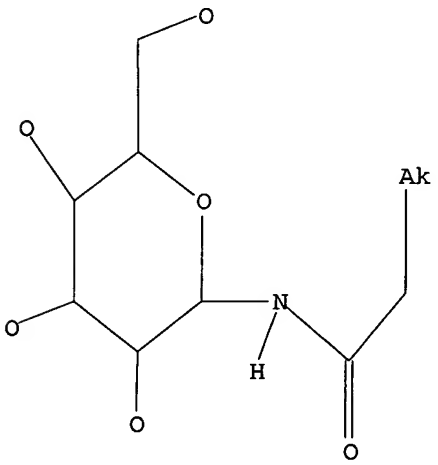
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
Uploading c:\10676436-1.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss sam
SAMPLE SEARCH INITIATED 13:53:53 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 453 TO ITERATE

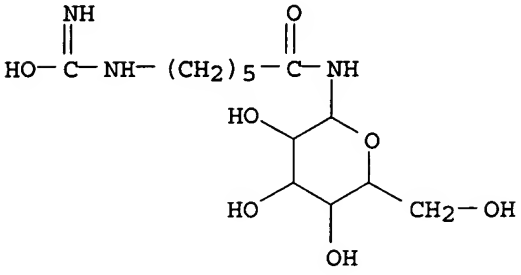
100.0% PROCESSED 453 ITERATIONS 50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 7784 TO 10336
PROJECTED ANSWERS: 640 TO 1520

L2 50 SEA SSS SAM L1

=> d scan

L2 50 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN Carbamimidic acid, [6-(β-D-glucopyranosylamino)-6-oxohexyl]- (9CI)
MF C13 H25 N3 O7
CI COM



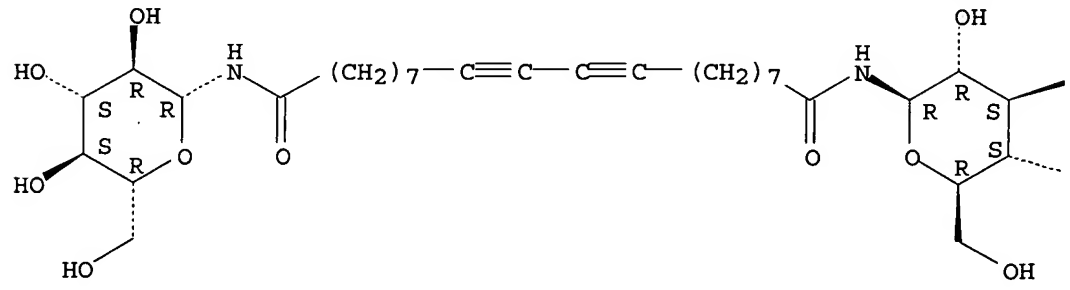
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 50 ANSWERS REGISTRY COPYRIGHT 2004 ACS on STN
IN 9,11-Eicosadiynediamide, N,N'-di-β-D-glucopyranosyl- (9CI)
MF C32 H52 N2 O12
CI COM

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

```
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**


HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):end

=> s l1 sss full
FULL SEARCH INITIATED 13:54:29 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   9751 TO ITERATE

100.0% PROCESSED    9751 ITERATIONS                          1131 ANSWERS
SEARCH TIME: 00.00.01

L3          1131 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                   155.84     156.05

FILE 'CAPLUS' ENTERED AT 13:54:41 ON 21 DEC. 2004
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FILE COVERS 1907 - 21 Dec 2004  VOL 141 ISS 26
FILE LAST UPDATED: 20 Dec 2004  (20041220/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s l3 and (drug or biomolecule or bioactive?)
           361 L3
        560379 DRUG
        285940 DRUGS
        705514 DRUG
                  (DRUG OR DRUGS)
           437 BIOMOLECULE
          2612 BIOMOLECULES
          3039 BIOMOLECULE
                  (BIOMOLECULE OR BIOMOLECULES)
          9048 BIOMOL
          9240 BIOMOLS
         14688 BIOMOL
                  (BIOMOL OR BIOMOLS)
         15298 BIOMOLECULE
                  (BIOMOLECULE OR BIOMOL)
         19120 BIOACTIVE?
L4          52 L3 AND (DRUG OR BIOMOLECULE OR BIOACTIVE?)

=> s l4 and (spacer or linker or lipid? or glycerol)
         37966 SPACER
```
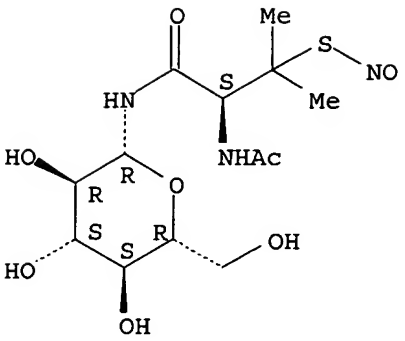

```
          13466 SPACERS
          45416 SPACER
                (SPACER OR SPACERS)
          16480 LINKER
           3896 LINKERS
          18712 LINKER
                (LINKER OR LINKERS)
         322342 LIPID?
         125721 GLYCEROL
           1265 GLYCEROLS
         126170 GLYCEROL
                (GLYCEROL OR GLYCEROLS)
L5           20 L4 AND (SPACER OR LINKER OR LIPID? OR GLYCEROL)

=> dis l5 1-20 bib abs hitstr

L5   ANSWER 1 OF 20  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:1006785  CAPLUS
DN   140:53460
TI   Methods and compositions involving aldose reductase inhibition by nitric
     oxide, and therapeutic use
IN   Srivastava, Satish K.; Ramana, K. Venkat; Bhatnagar, Aruni
PA   Board of Regents, the University of Texas System, USA
SO   PCT Int. Appl., 121 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
PI   WO 2003105864         A1    20031224    WO 2003-US18979         20030613
     WO 2003105864         C2    20040624
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
             TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     US 2004047919         A1    20040311    US 2003-462223          20030613
PRAI US 2002-388213P       P     20020613
AB   Embodiments of the invention include methods and compns. for the
     inhibition of aldose reductase by nitric oxide.  Certain embodiments of
     the invention include the induction of nitric oxide by administration of a
     nitric oxide donor, nitric oxide precursor, inhibitor of a nitric oxide
     synthase inhibitor, and/or an activator of nitric oxide synthase.  Methods
     may include the treatment of various disease states by inhibiting aldose
     reductase.
IT   188849-81-2
     RL: PAC (Pharmacological activity); BIOL (Biological study)
        (aldose reductase inhibition by nitric oxide, and therapeutic use)
RN   188849-81-2  CAPLUS
CN   Butanamide, 2-(acetylamino)-N-β-D-glucopyranosyl-3-methyl-3-
     (nitrosothio)-, (2S)- (9CI)  (CA INDEX NAME)

Absolute stereochemistry.
```

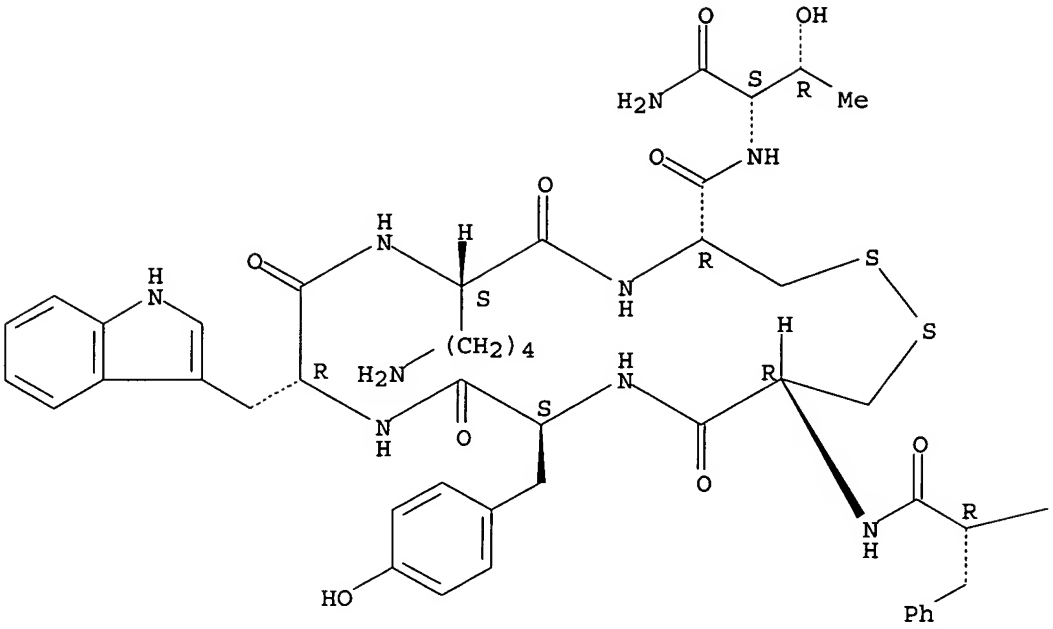


RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

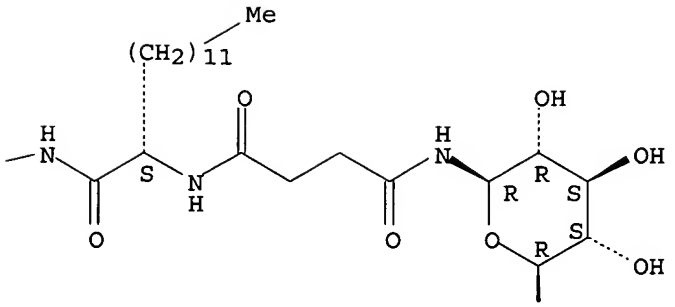
L5 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:509516 CAPLUS
DN 140:211067
TI Glycolipid-modified peptides: Enhancement of absorption of an anti-tumor somatostatin analogue
AU Malkinson, John P.; Lazorova, Lucia; Artursson, Per; Keri, Gyoergy; Toth, Istvan
CS School of Pharmacy, University of London, London, WC1N 1AX, UK
SO Peptides 2000, Proceedings of the European Peptide Symposium, 26th, Montpellier, France, Sept. 10-15, 2000 (2001), Meeting Date 2000, 319-320. Editor(s): Martinez, Jean; Fehrentz, Jean-Alain. Publisher: Editions EDK, Paris, Fr.
CODEN: 69EDWK; ISBN: 2-84254-048-4
DT Conference
LA English
AB The cyclic heptapeptide analog TT-232 and its linear precursor have been conjugated to a delivery system based upon lipoamino acids (α-amino acids with long alkyl side chains) to improve its absorption and/or targeting. A series of C- and N-terminal **lipid**- and/or carbohydrate-modified conjugates were synthesized, varying the number, nature, and relative positioning of the **lipid** and carbohydrate moieties. The conjugates retained their anti-proliferative activity, and the N-terminal glycolipid-modified conjugates demonstrated greatly enhanced permeability across Caco-2 cell monolayers. Further, a series of carbohydrate- and glycolipid-modified conjugates was prepared Peptides were synthesized manually using standard Fmoc/tBu solid phase chemical Lipoamino acids were introduced as their Nα-Dde protected derivs. A protected β-glucuronide-based building block was also prepared and conjugated. O-acetyl deprotection was achieved on the solid-phase using methanolic hydrazine, followed by radiolabeling with tritiated acetic anhydride.
IT **664333-09-9 664333-15-7 664333-17-9**
664333-18-0 664333-19-1 664333-20-4
664333-21-5 664333-22-6 664333-23-7
664333-24-8 664333-25-9 664333-26-0
664333-27-1
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PKT (Pharmacokinetics); PYP (Physical process); BIOL (Biological study); PROC (Process)
(glycolipid-modified peptides in relation to enhancement of permeability of anti-tumor somatostatin analog in Caco-2 cell monolayers)
RN 664333-09-9 CAPLUS
CN L-Threoninamide, (2S)-2-[[4-(β-D-glucopyranosylamino)-1,4-dioxobutyl]amino]tetradecanoyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-cysteinyl-, cyclic (3→7)-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

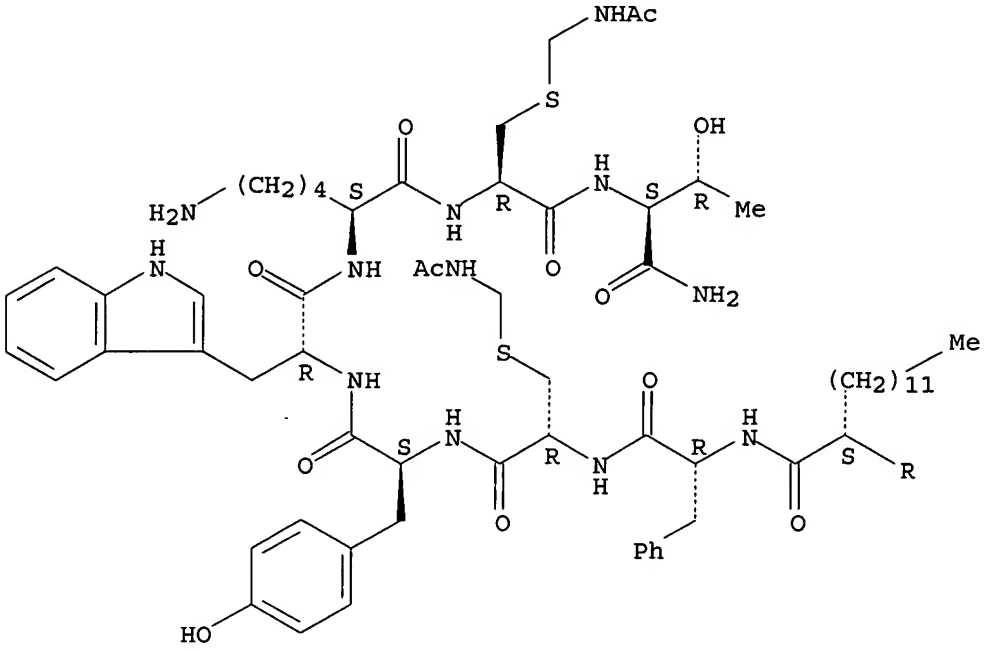


PAGE 2-B

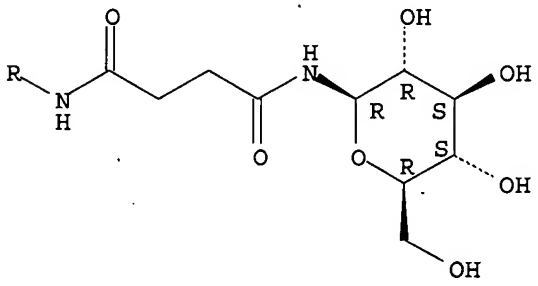
RN 664333-15-7 CAPLUS
CN L-Threoninamide, (2S)-2-[[4-(β-D-glucopyranosylamino)-1,4-dioxobutyl]amino]tetradecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

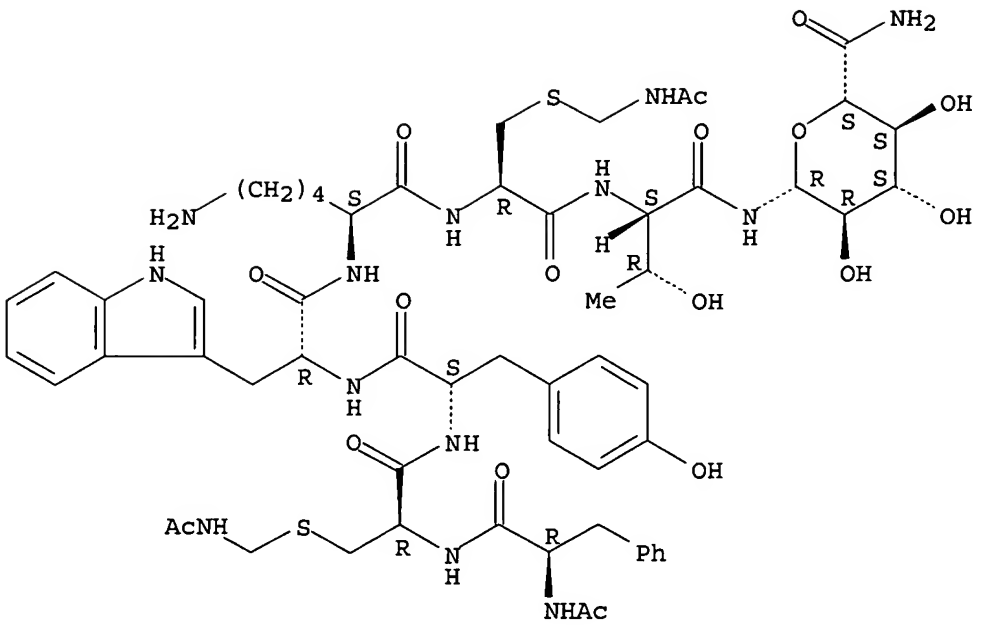


PAGE 2-A



RN 664333-17-9 CAPLUS
CN L-Threoninamide, N-acetyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl-N-β-D-glucopyranuronamidosyl- (9CI) (CA INDEX NAME)

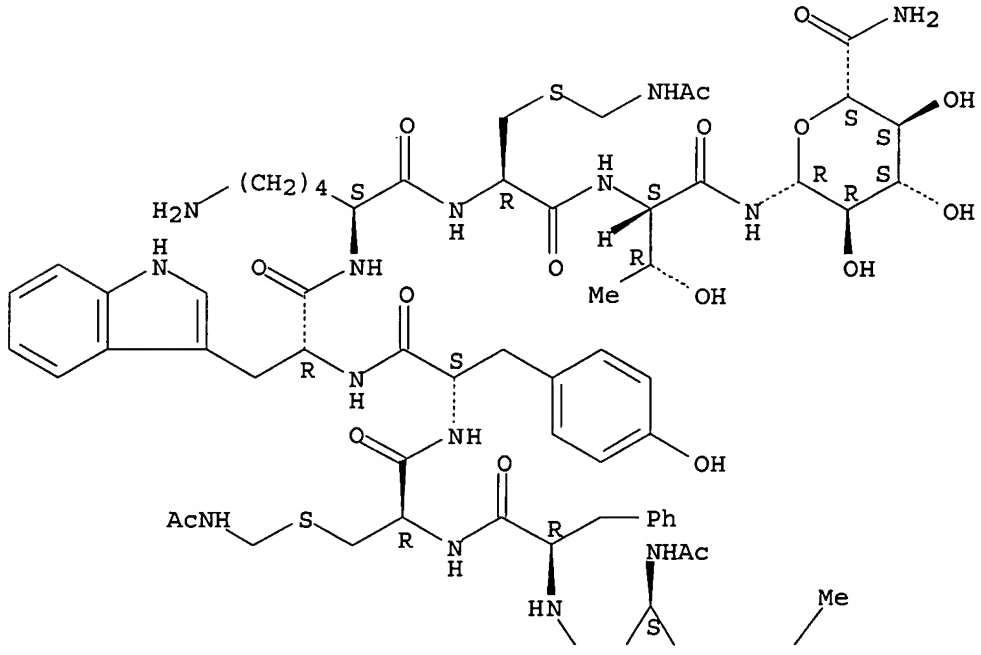
Absolute stereochemistry.



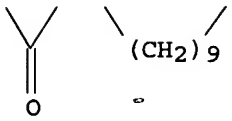
RN 664333-18-0 CAPLUS
CN L-Threoninamide, (2S)-2-(acetylamino)dodecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl-N-β-D-glucopyranuronamidosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



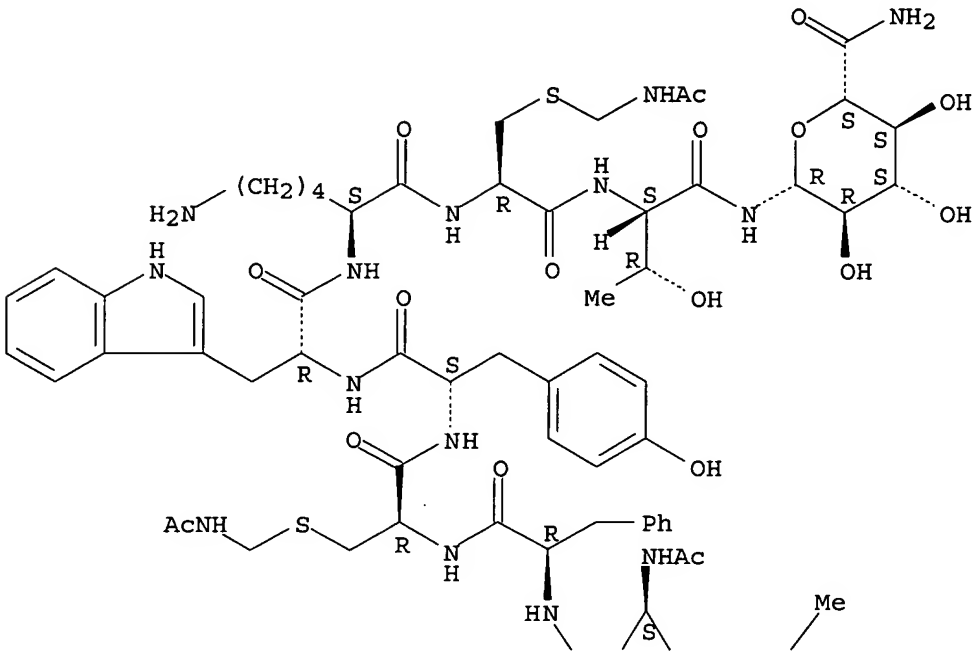
PAGE 2-A



RN 664333-19-1 CAPLUS
CN L-Threoninamide, (2S)-2-(acetylamino)tetradecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl-N-β-D-glucopyranuronamidosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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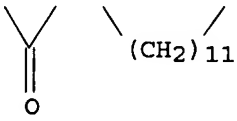
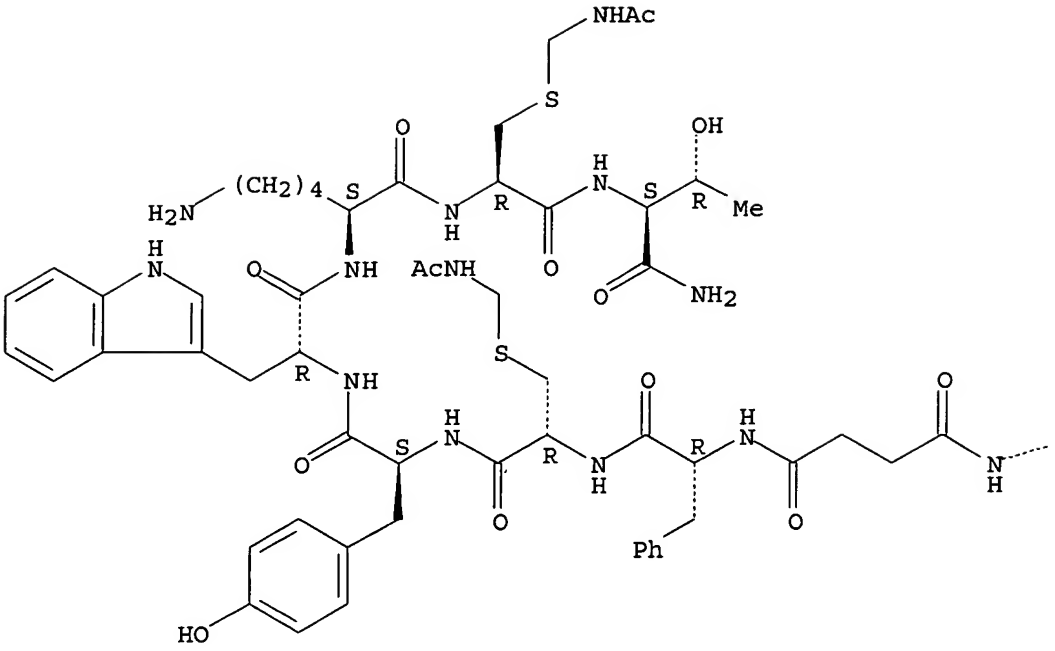


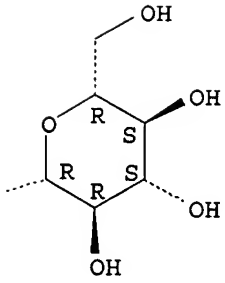
RN 664333-20-4 CAPLUS
CN L-Threoninamide, N-[4-(β-D-glucopyranosylamino)-1,4-dioxobutyl]-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



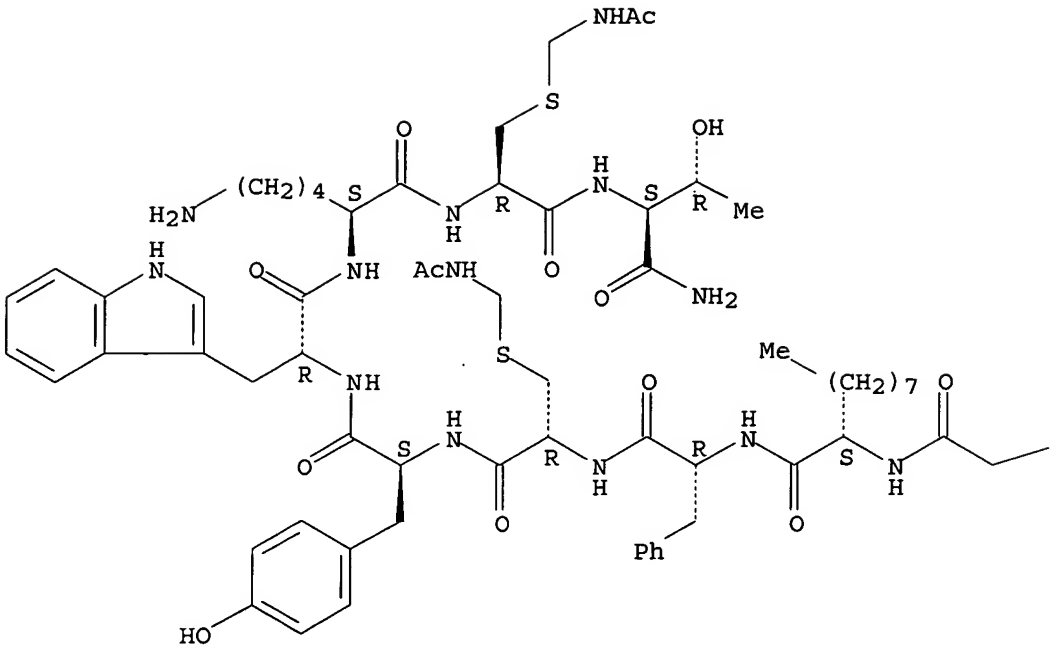
PAGE 1-B



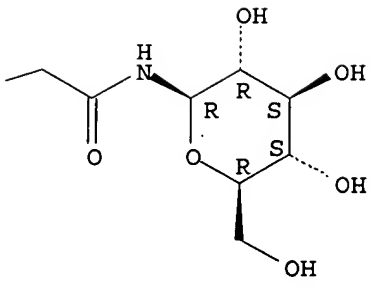
RN 664333-21-5 CAPLUS
CN L-Threoninamide, (2S)-2-[[4-(β-D-glucopyranosylamino)-1,4-dioxobutyl]amino]decanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



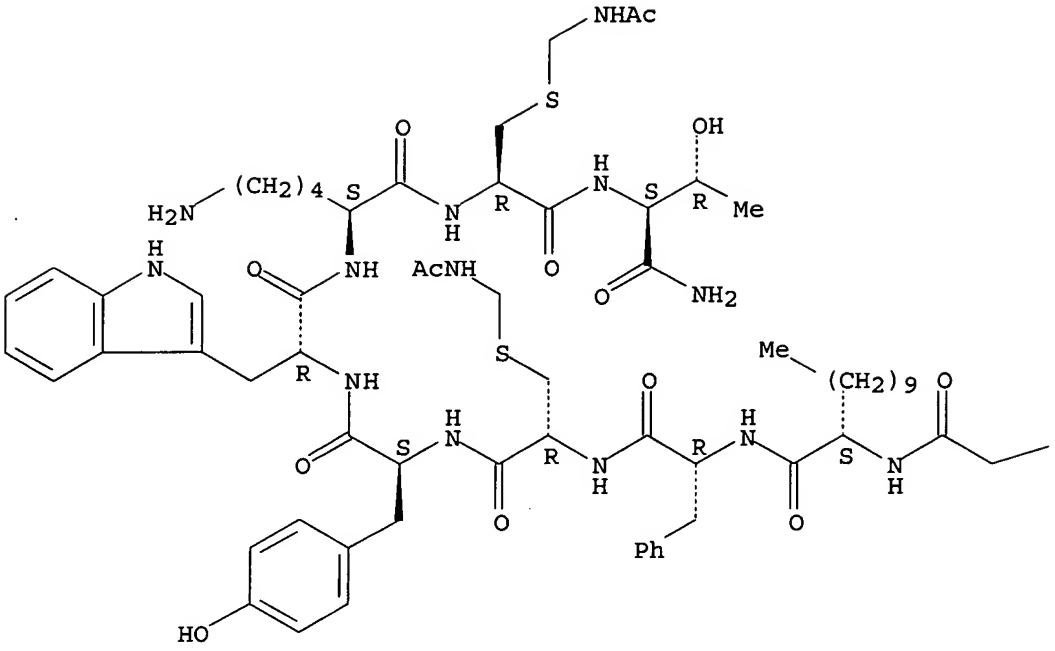
PAGE 1-B



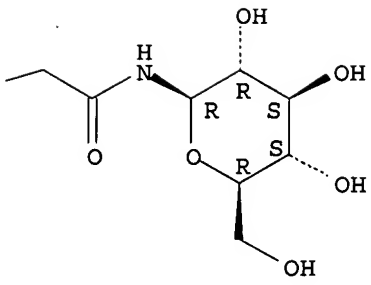
RN 664333-22-6 CAPLUS
CN L-Threoninamide, (2S)-2-[[4-(β-D-glucopyranosylamino)-1,4-dioxobutyl]amino]dodecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



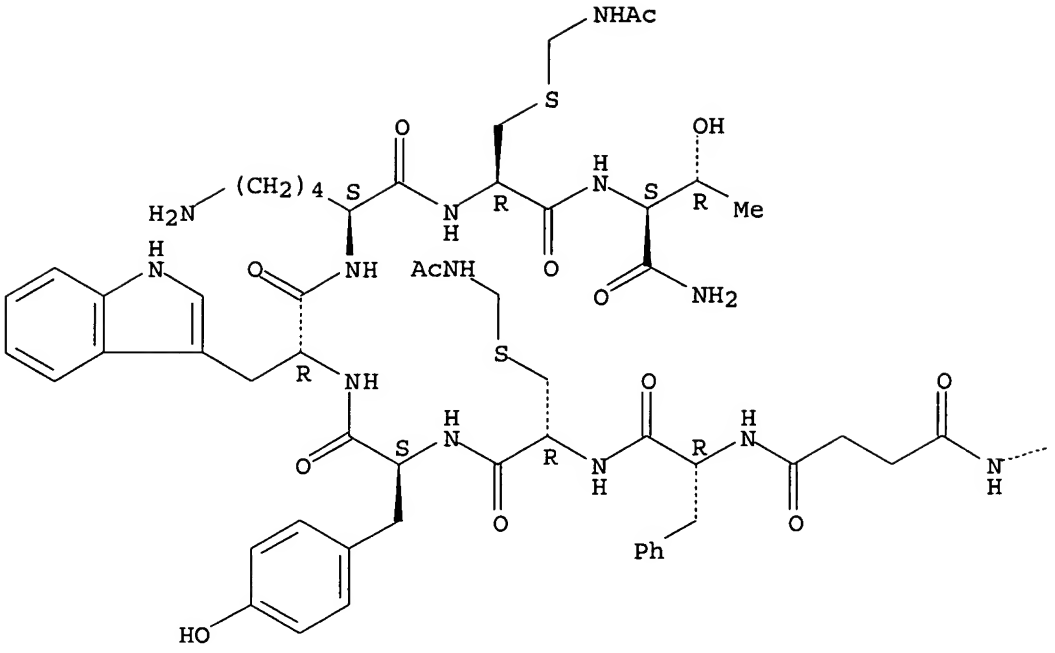
PAGE 1-B



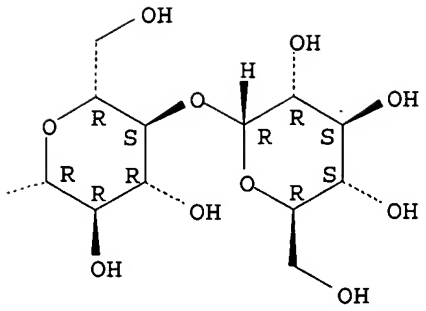
RN 664333-23-7 CAPLUS
CN L-Threoninamide, N-[4-[(4-O-α-D-glucopyranosyl-β-D-glucopyranosyl)amino]-1,4-dioxobutyl]-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



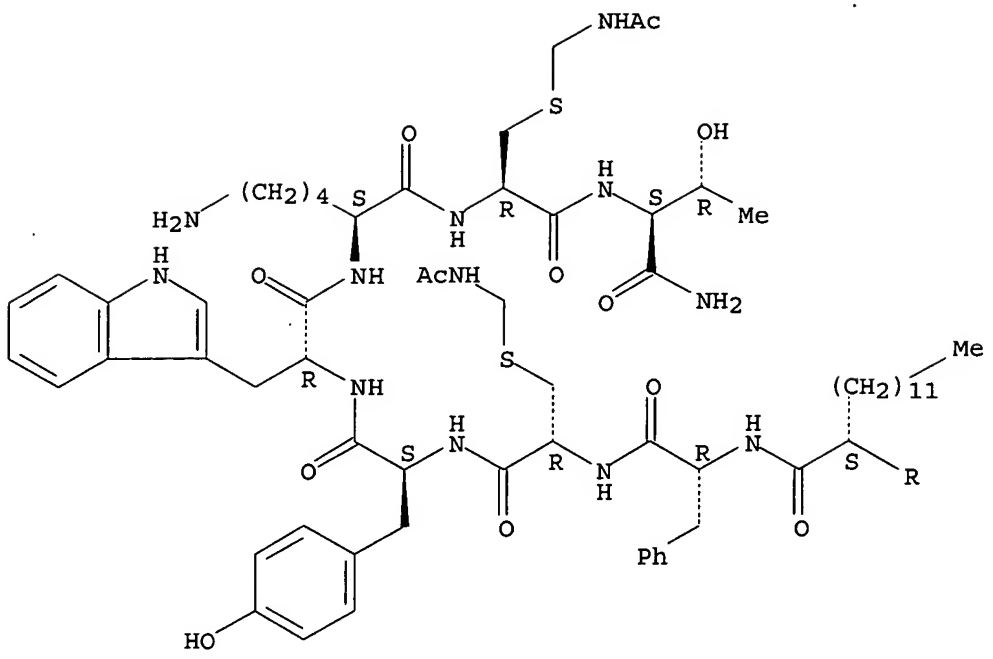
PAGE 1-B



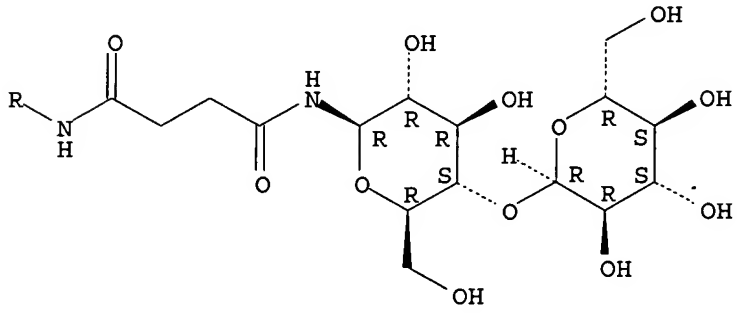
RN 664333-24-8 CAPLUS
CN L-Threoninamide, (2S)-2-[[4-[(4-O-α-D-glucopyranosyl-β-D-glucopyranosyl)amino]-1,4-dioxobutyl]amino]tetradecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



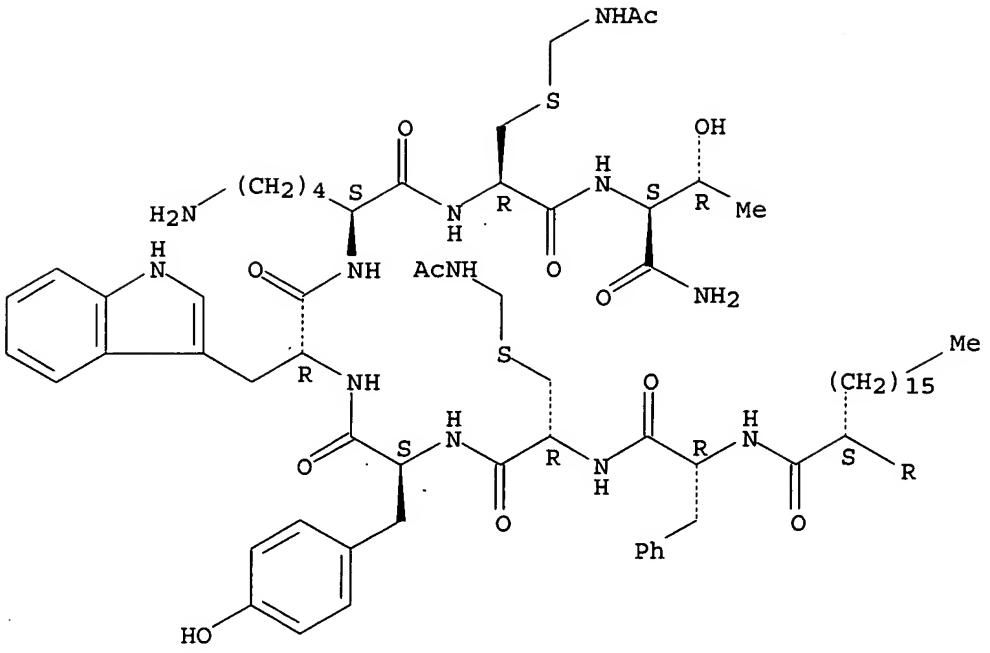
PAGE 2-A



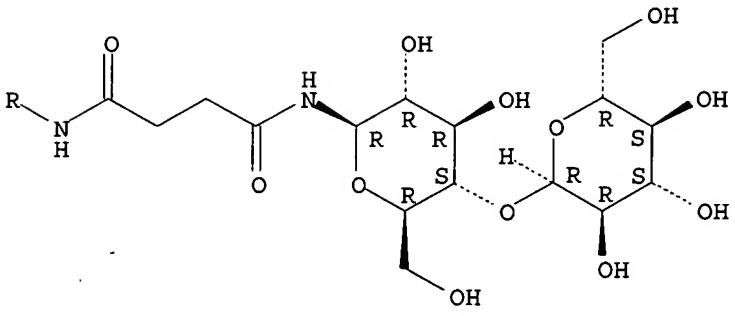
RN 664333-25-9 CAPLUS
CN L-Threoninamide, (2S)-2-[[4-[(4-O-α-D-glucopyranosyl-β-D-glucopyranosyl)amino]-1,4-dioxobutyl]amino]octadecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



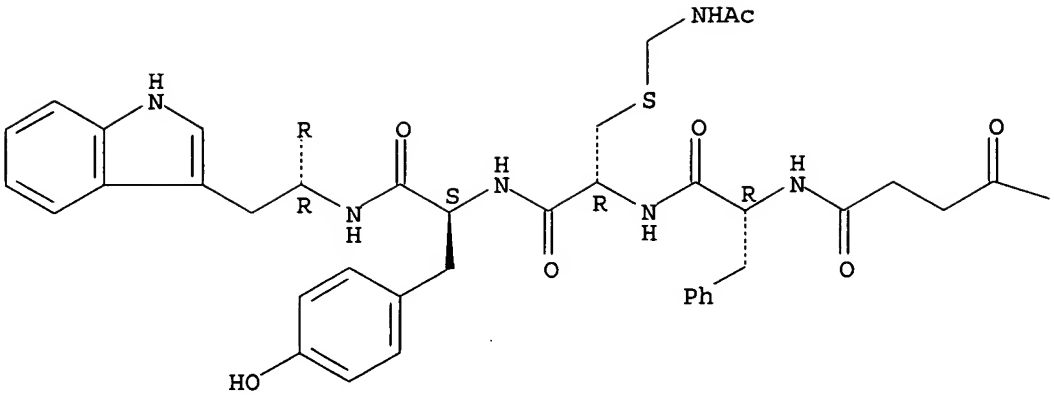
PAGE 2-A



RN 664333-26-0 CAPLUS
CN Glycine, N-[4-(β-D-glucopyranosylamino)-1,4-dioxobutyl]-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl-L-threonyl-(2S)-2-aminodecanoyl-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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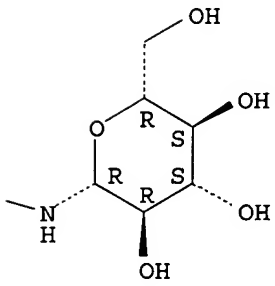

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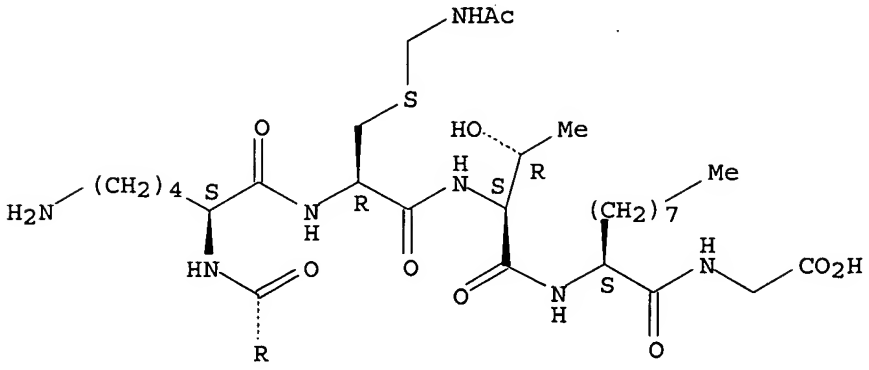
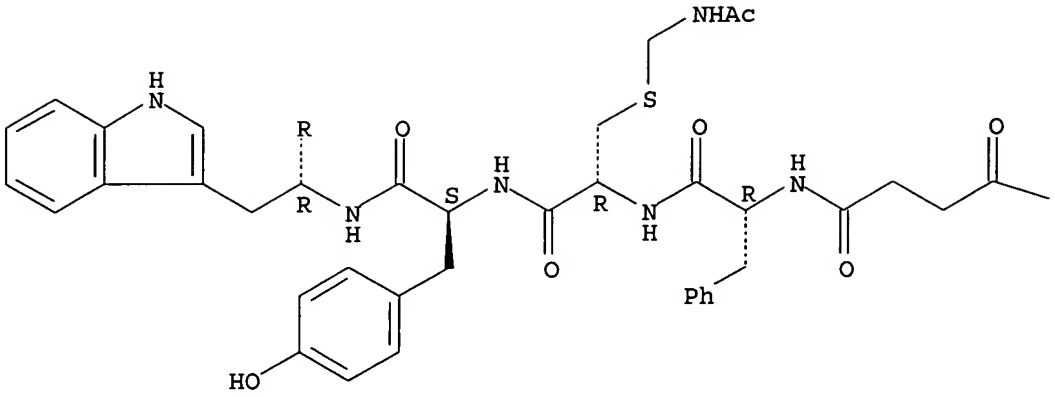


RN 664333-27-1 CAPLUS

CN Glycine, N-[4-[(4-O-α-D-glucopyranosyl-β-D-glucopyranosyl)amino]-1,4-dioxobutyl]-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl-L-threonyl-(2S)-2-aminodecanoyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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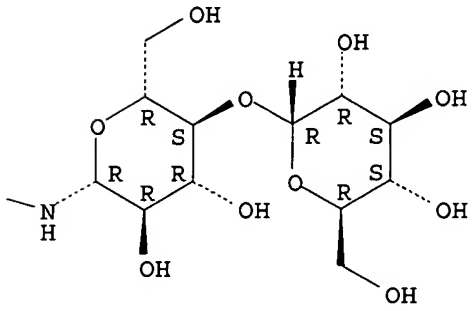

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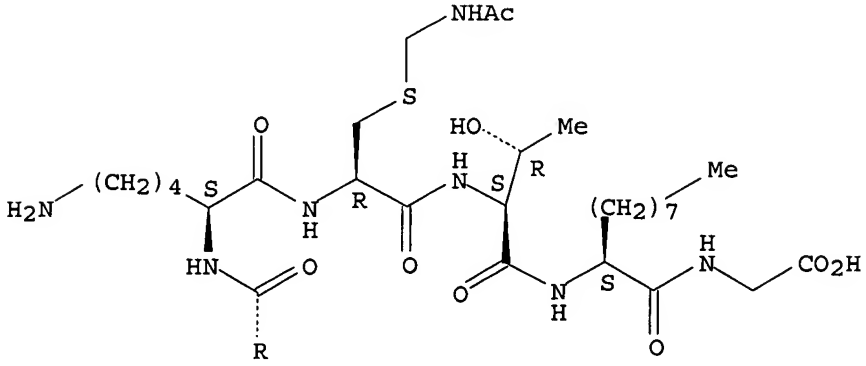
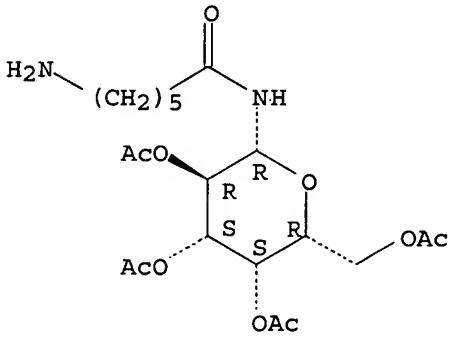


RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:914245 CAPLUS
DN 138:122801
TI Synthesis of Antisense Oligonucleotides Conjugated to a Multivalent Carbohydrate Cluster for Cellular Targeting
AU Maier, Martin A.; Yannopoulos, Constantin G.; Mohamed, Nazim; Roland, Arlene; Fritz, Hans; Mohan, V.; Just, George; Manoharan, Muthiah
CS Department of Medicinal Chemistry, Isis Pharmaceuticals Inc., Carlsbad, CA, 92008, USA

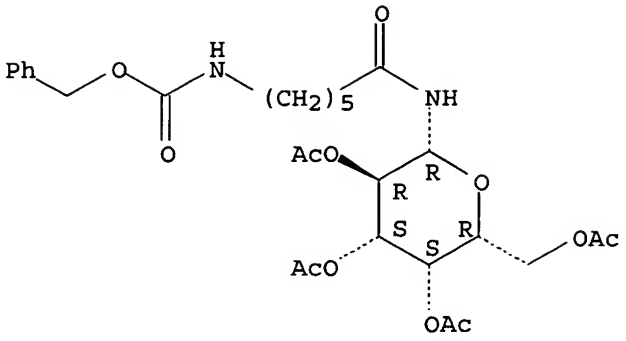
SO Bioconjugate Chemistry (2003), 14(1), 18-29
CODEN: BCCHES; ISSN: 1043-1802
PB American Chemical Society
DT Journal
LA English
OS CASREACT 138:122801
AB Carrier-mediated delivery holds great promise for significantly improving the cellular uptake and therefore the therapeutic efficacy of antisense oligonucleotides in vivo. A multivalent carbohydrate recognition motif for the asialoglycoprotein receptor has been designed for tissue and cell-specific delivery of antisense **drugs** to parenchymal liver cells. To combine low mol. weight with high receptor affinity, the synthetic ligand contains three galactosyl residues attached to a cholane scaffold via ε-aminocapramide **linkers**. Three-dimensional structural calcns. indicate that this unique design provides proper spacing and orientation of the three galactosyl residues to accomplish high affinity binding to the receptor. Covalent conjugation of the bulky carbohydrate cluster to oligonucleotides has been achieved by solid-phase synthesis using low-loaded macroporous resins and optimized synthesis protocols.
IT **252769-06-5P 252769-08-7P 252769-13-4P**
489459-96-3P 489459-99-6P 489460-03-9P
489460-06-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis of antisense oligonucleotides conjugated to multivalent carbohydrate cluster for cellular targeting)
RN 252769-06-5 CAPLUS
CN Hexanamide, 6-amino-N-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 252769-08-7 CAPLUS
CN Carbamic acid, [6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

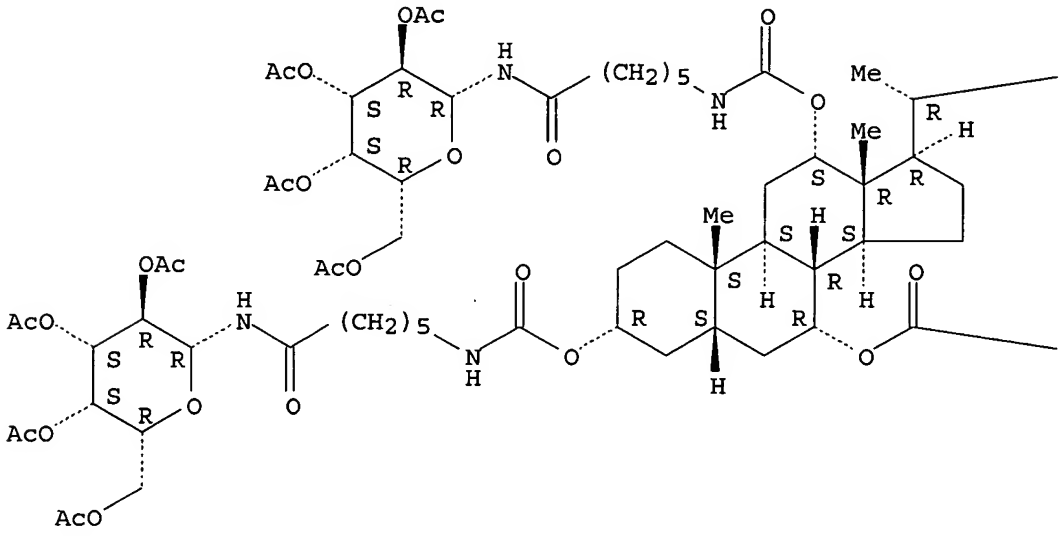
Absolute stereochemistry.

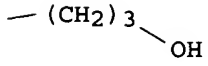


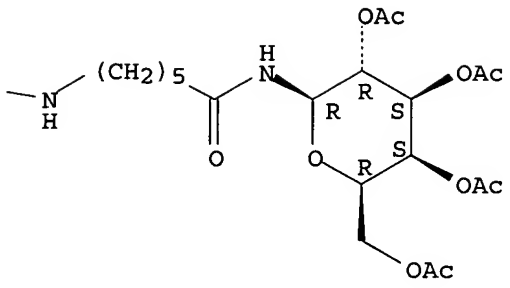
RN 252769-13-4 CAPLUS
CN Cholane-3,7,12,24-tetrol, 3,7,12-tris[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]carbamate], (3α,5β,7α,12α)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

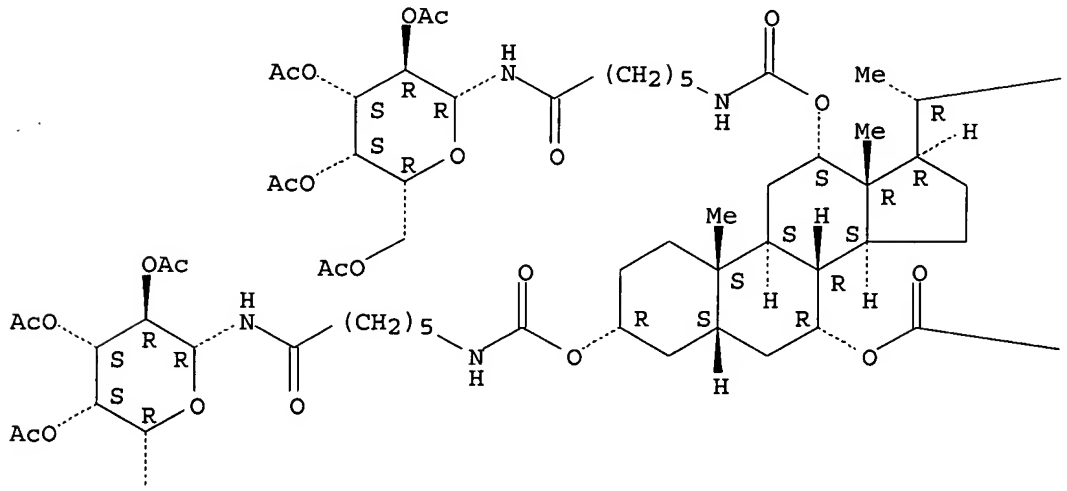




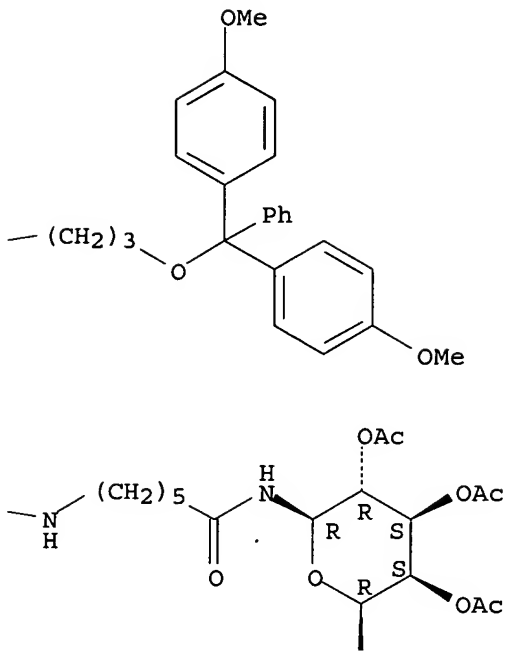


RN 489459-96-3 CAPLUS
CN Cholane-3,7,12-triol, 24-[bis(4-methoxyphenyl)phenylmethoxy]-, tris[6-oxo-6-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]hexyl]carbamate], (3α,5β,7α,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



PAGE 1-B



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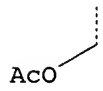

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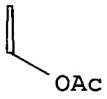
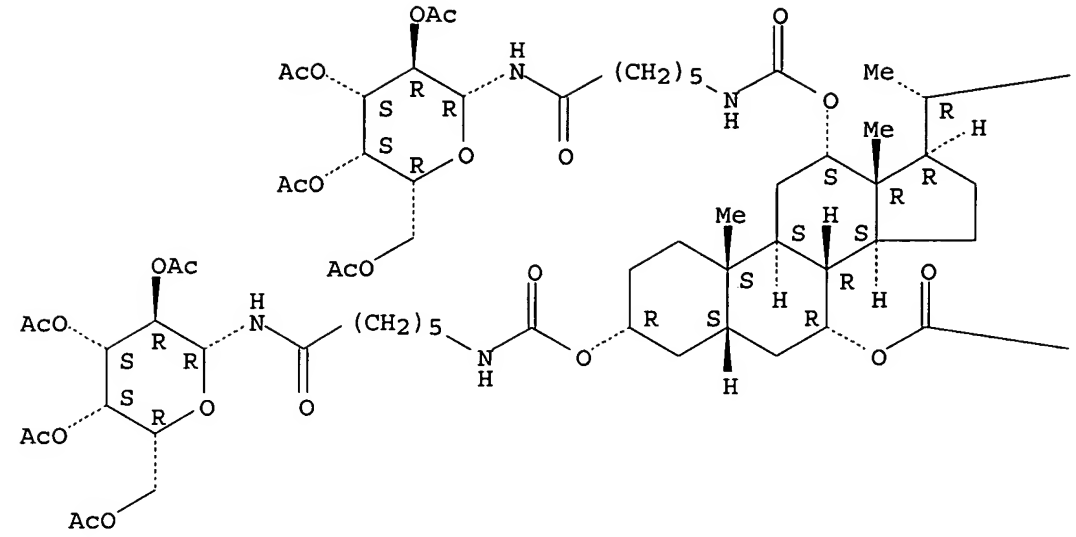


RN 489459-99-6 CAPLUS
CN Cholane-3,7,12-triol, 24-[[[bis(1-methylethyl)amino](2-cyanoethoxy)phosphino]oxy]-, tris[6-oxo-6-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]carbamate], (3α,5β,7α,12.alpha.)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



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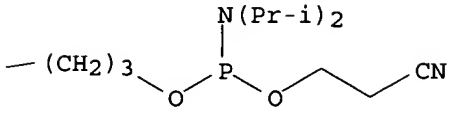
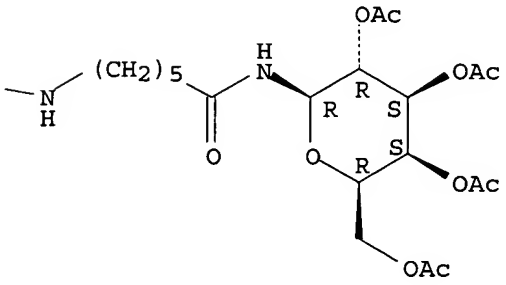
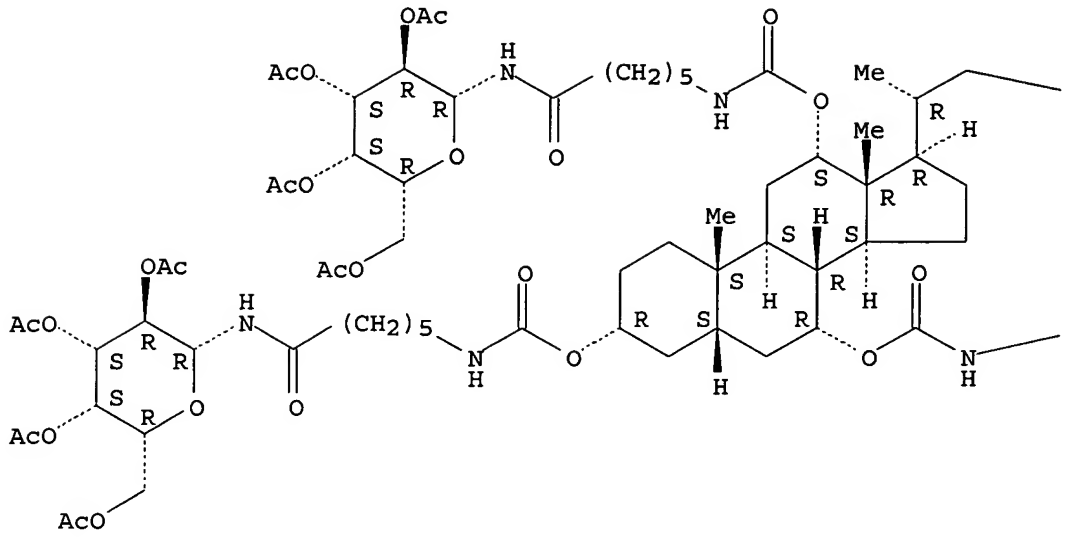




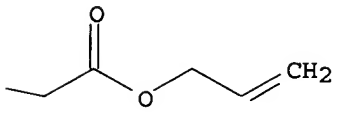
RN 489460-03-9 CAPLUS
CN Cholan-24-oic acid, 3,7,12-tris[[[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]amino]carbonyl]oxy]-, 2-propenyl ester, (3α,5β,7α,12α)- (9CI) (CA INDEX NAME)

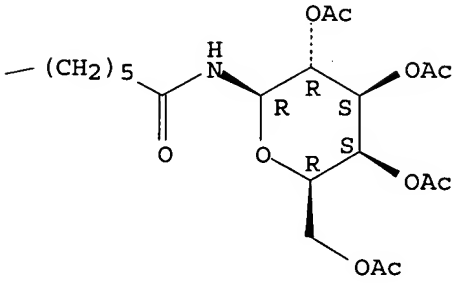
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

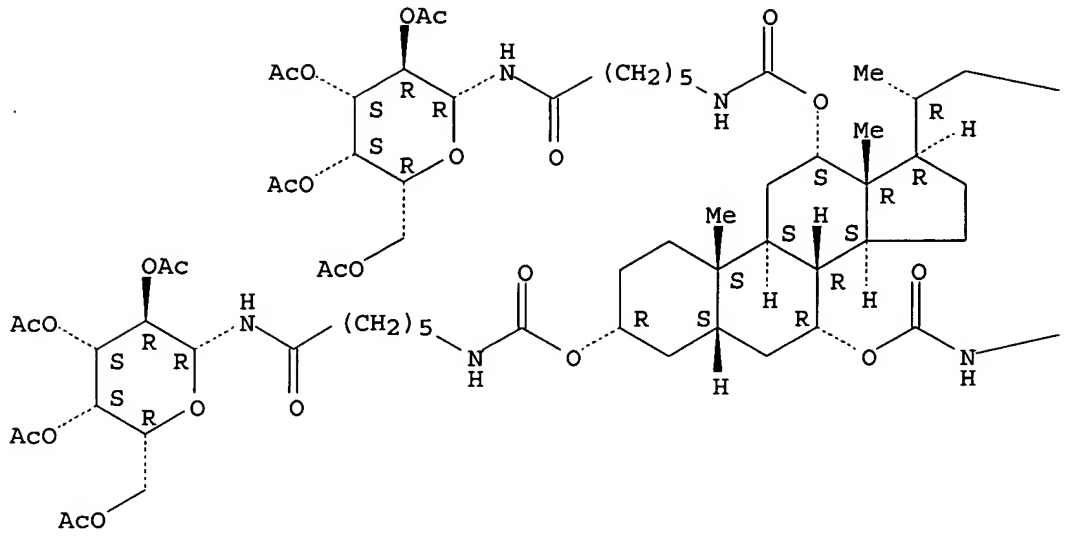




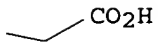
RN 489460-06-2 CAPLUS
CN Cholan-24-oic acid, 3,7,12-tris[[[[6-oxo-6-[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]hexyl]amino]carbonyl]oxy]-, (3α,5β,7α,12α)- (9CI) (CA INDEX NAME)

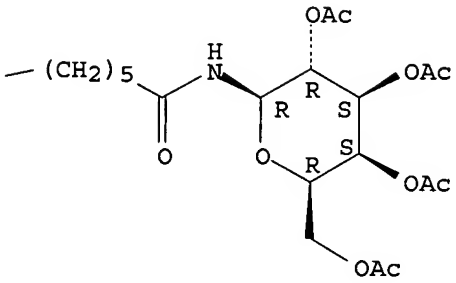
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B





RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:521752 CAPLUS
DN 137:79182
TI Preparation of monosaccharide and oligosaccharide lipo-amino acids as pharmaceutical agents used for oral administration as delivery systems
IN Toth, Istvan; Falconer, Robert
PA Alchemia Pty. Ltd., Australia
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 2002053572	A1	20020711
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
	US 2004176281	A1	20040909
PRAI	GB 2001-115	A	20010104
	WO 2002-AU5	A2	20020103

PI	WO 2002-AU5		20020103
	US 2003-676436		20030630

OS MARPAT 137:79182

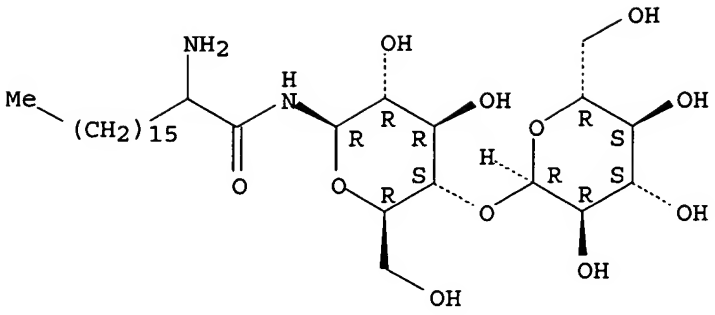
AB The invention relates to compds. r[D(nz)]p[(Wq-S-X-L)(my)] in which D is a therapeutically useful mol.; r is 0, or is an integer greater than or equal to 1; p, n and m may be the same or different, and are independently integers greater than or equal to 1; n and m represent the overall magnitude of the charge on the mols.; and z and y are charges, either pos. (+) or neg. (-), such that when z is pos., y is neg. and vice versa; and [(Wq-S-X-L)(my)] is a carrier compound, in which X is a covalent bond, or is a **linker** group, selected from 2 to 14 atom **spacers**, which may be substituted or unsubstituted, branched or linear; S is a mono- or oligosaccharide; L is a **lipidic** moiety; W may be absent, or is a 3 to 10 atom alkyl or heteroalkyl **spacer**, which may be branched or linear, and is substituted with one or more functional groups, each of which is charged or is capable of carrying a charge under physiol. conditions; and q is 0 when W is absent, or is an integer, which ranges from 3 to the number of hydroxys available for substitution on the mono- or oligosaccharide., which are useful in the delivery of a wide variety of therapeutically useful mols. In particular, the invention relates to compds. which are able to act as carriers for therapeutically useful mols., and to pharmaceutical agents comprising these carriers. The compds. of the invention comprise a mono- or oligosaccharide, a **lipidic** moiety, and optionally a **linker** and/or a **spacer**. The pharmaceutical agents of the invention are particularly useful for oral administration. Thus, 2,3,4,6-tetra-O-acetyl-N-[[[2-(R/S)[(tert-butoxycarbonyl)amino]tetradecyl]amino]carbonothioyl]-β-D-glucopyranosylamine was prepared as pharmaceutical agent used for oral administration as **drug** delivery system, (no data). A formulation intended for oral administration to humans may contain about 1 mg to 1 g of an active compound with an appropriate and convenient amount of carrier material, which may vary from about 5 to 95 percent of the total composition Dosage unit forms will generally contain between from about 1 mg to 500 mg of active ingredient.

IT **192385-43-6P 192385-44-7P 441016-31-5P 441016-32-6P**
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of monosaccharide and oligosaccharide lipoamino acids as pharmaceutical agents used for oral administration as delivery systems)

RN 192385-43-6 CAPLUS

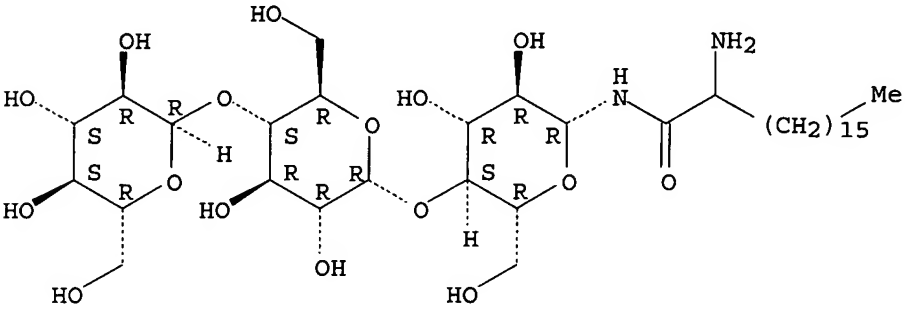
CN Octadecanamide, 2-amino-N-(4-O-α-D-glucopyranosyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



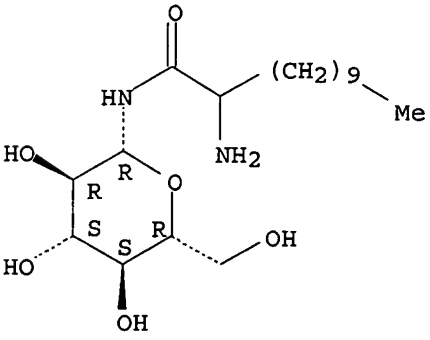
RN 192385-44-7 CAPLUS
CN Octadecanamide, 2-amino-N-(O-α-D-glucopyranosyl-(1→4)-O-α-D-glucopyranosyl-(1→4)-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



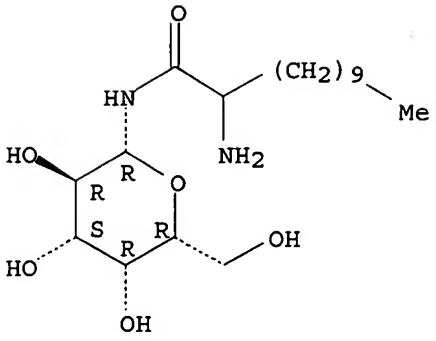
RN 441016-31-5 CAPLUS
CN Dodecanamide, 2-amino-N-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 441016-32-6 CAPLUS
CN Dodecanamide, 2-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

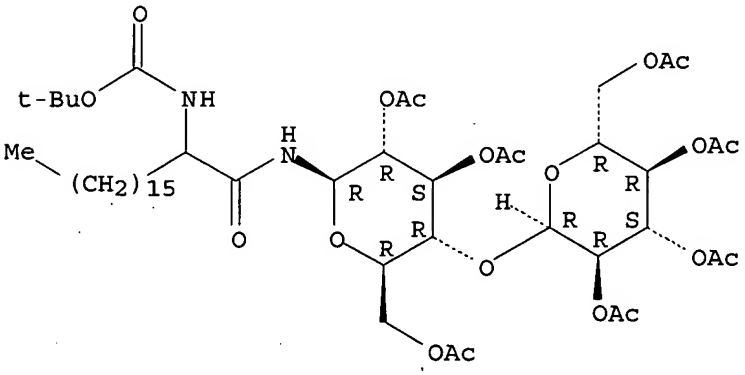


IT **199448-59-4P 199448-61-8P 441016-23-5P**
441016-24-6P 441016-28-0P 441016-29-1P
441016-44-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of monosaccharide and oligosaccharide lipoamino acids as pharmaceutical agents used for oral administration as delivery systems)

RN 199448-59-4 CAPLUS

CN Carbamic acid, [1-[[[2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl)-β-D-glucopyranosyl]amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

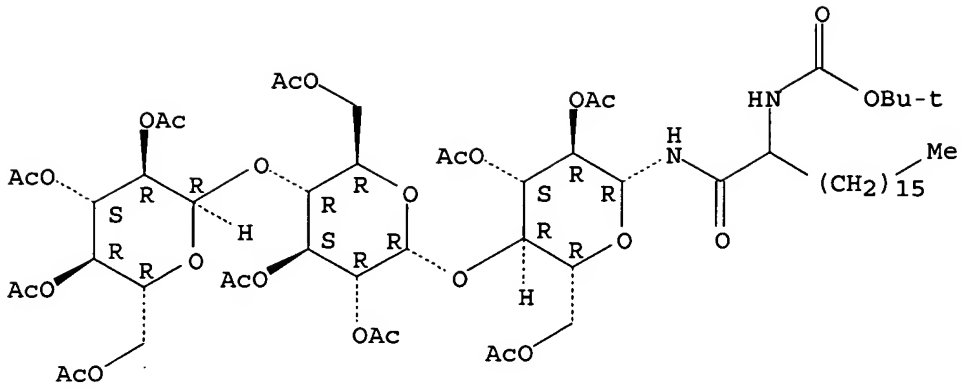
Absolute stereochemistry.



RN 199448-61-8 CAPLUS

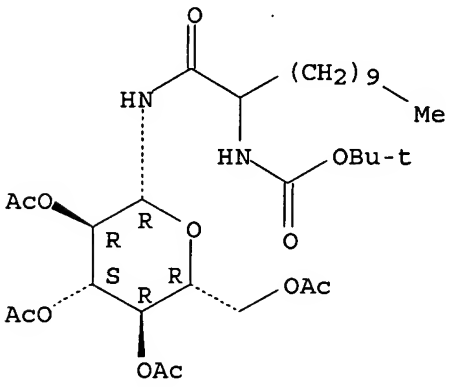
CN Carbamic acid, [1-[[(O-2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl-(1→4)-O-2,3,6-tri-O-acetyl-α-D-glucopyranosyl-(1→4)-2,3,6-tri-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



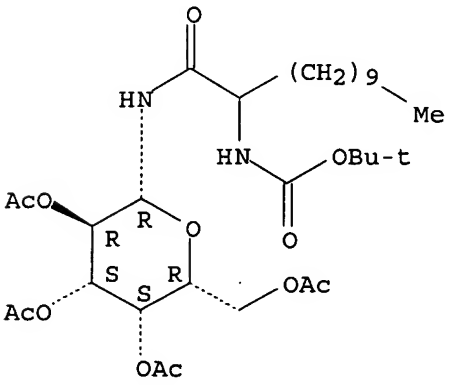
RN 441016-23-5 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]undecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 441016-24-6 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]carbonyl]undecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

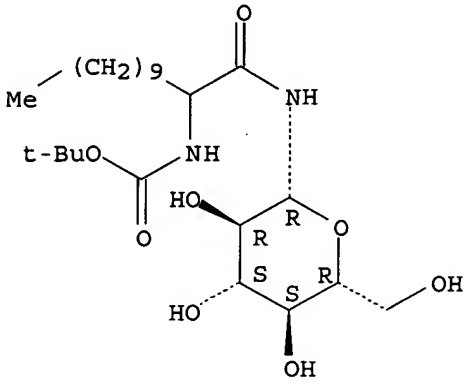
Absolute stereochemistry.



RN 441016-28-0 CAPLUS
CN Carbamic acid, [1-[(β-D-glucopyranosylamino)carbonyl]undecyl]-,

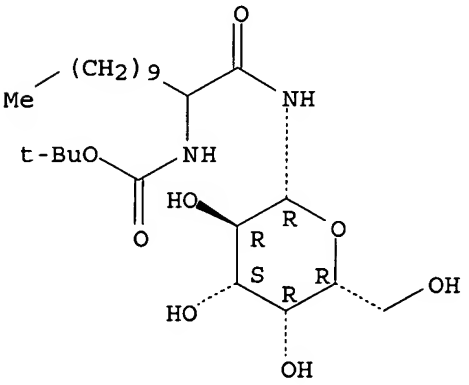
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



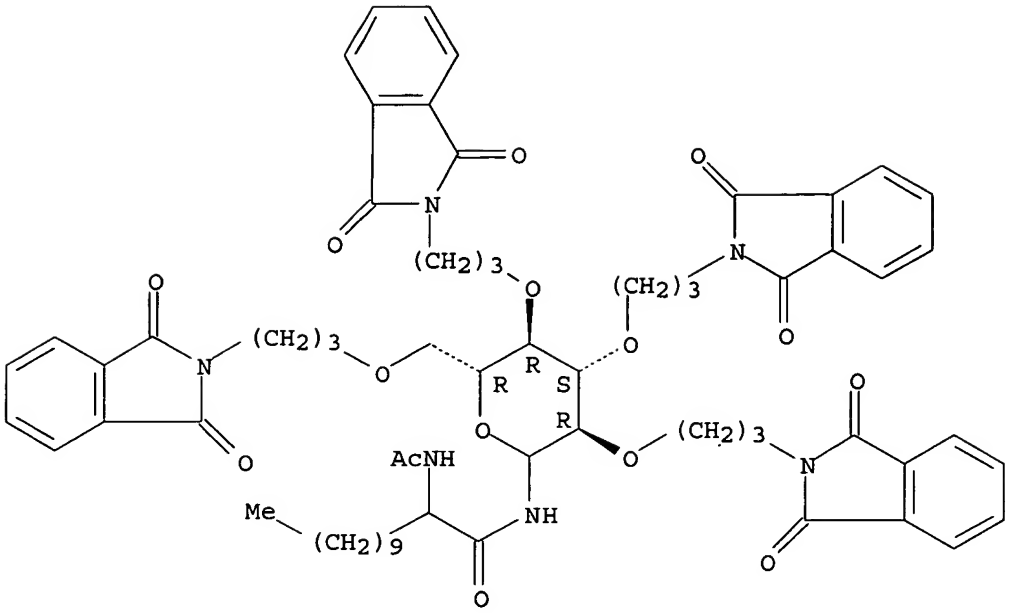
RN 441016-29-1 CAPLUS
CN Carbamic acid, [1-[(β-D-galactopyranosylamino)carbonyl]undecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 441016-44-0 CAPLUS
CN Dodecanamide, 2-(acetylamino)-N-[2,3,4,6-tetrakis-O-[3-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)propyl]-D-glucopyranosyl]- (9CI) (CA INDEX NAME)

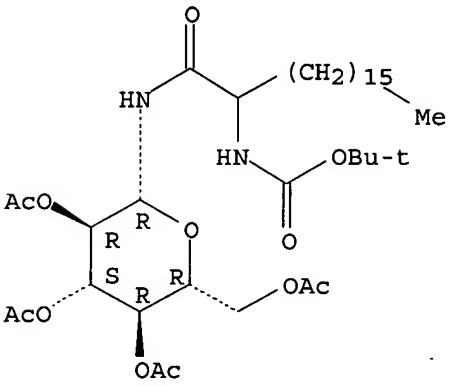
Absolute stereochemistry.



IT **199448-57-2P 215254-45-8P 365441-37-8P 441016-25-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of monosaccharide and oligosaccharide lipoamino acids as pharmaceutical agents used for oral administration as delivery systems)

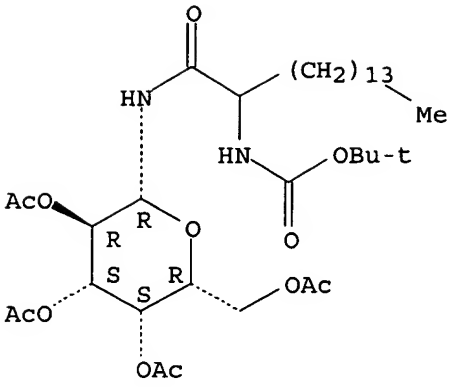
RN 199448-57-2 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



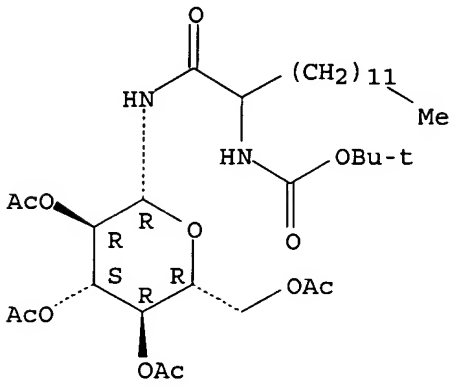
RN 215254-45-8 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]carbonyl]pentadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



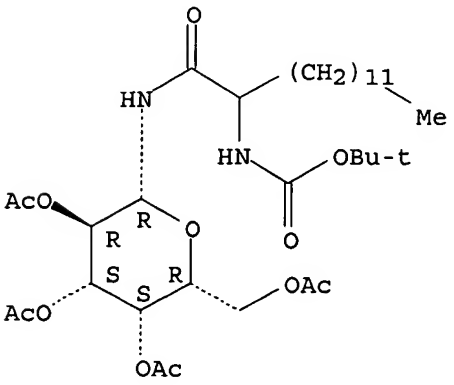
RN 365441-37-8 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]tridecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 441016-25-7 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]carbonyl]tridecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

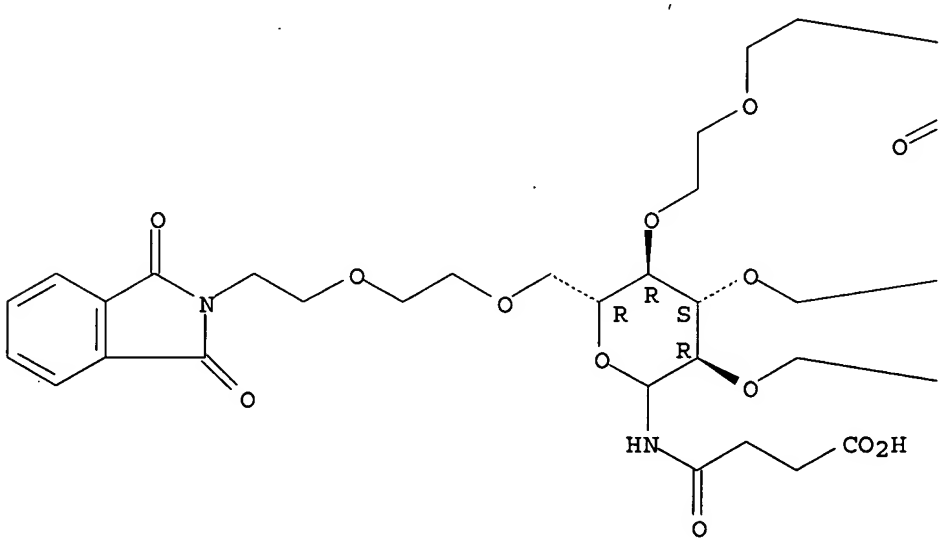


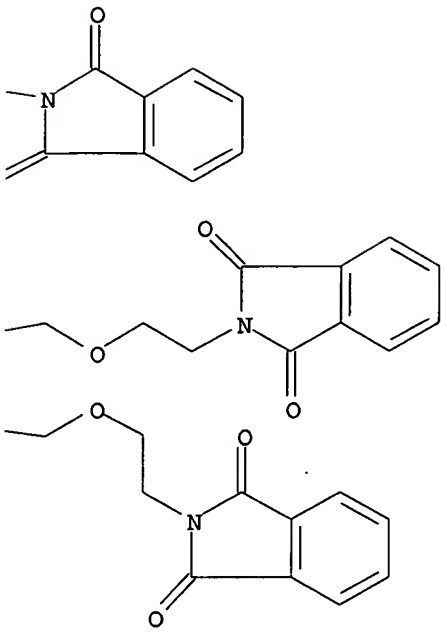
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:509421 CAPLUS
DN 138:358249
TI Towards synthetic vaccines built on carbohydrate cores
AU McGeary, Ross P.; Jablonkai, Istvan; Toth, Istvan
CS School of Pharmacy, The University of Queensland, Brisbane, 4072, Australia
SO Letters in Peptide Science (2002), Volume Date 2001, 8(3-5), 273-276
CODEN: LPSCEM; ISSN: 0929-5666
PB Kluwer Academic Publishers
DT Journal
LA English
AB Lipophilic polyfunctional carbohydrate core/templates have been designed and developed for **drug**/vaccine delivery. Three carbohydrate-based templates containing four protected N-terminal arms were synthesized from glucose and galactose. Me α-D-glucopyranoside was converted to two derivs. bearing a carboxylic acid handle for attachment to solid supports, **spacer** arms of differing hydrophilicity, and phthaloyl-protected amino groups suitable for peptide chain extension. β-D-Galactopyranosyl azide was converted to a template bearing a carboxylic acid handle and four BOC-protected amines. All the templates were found to be suitable for attachment to solid supports and subsequent cleavage from resins, using either BOC- or FMOC-methodologies.
IT **394245-94-4P 394245-96-6P 394245-97-7P**
518307-50-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(towards synthetic vaccines built on carbohydrate cores)
RN 394245-94-4 CAPLUS
CN Butanoic acid, 4-oxo-4-[[2,3,4,6-tetrakis-O-[2-[2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethoxy]ethyl]-D-glucopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

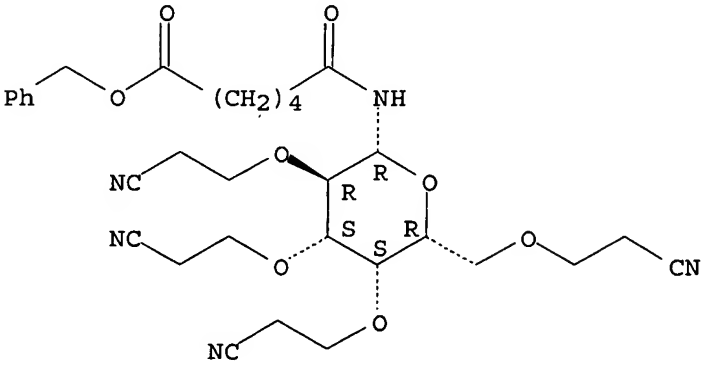
PAGE 1-A





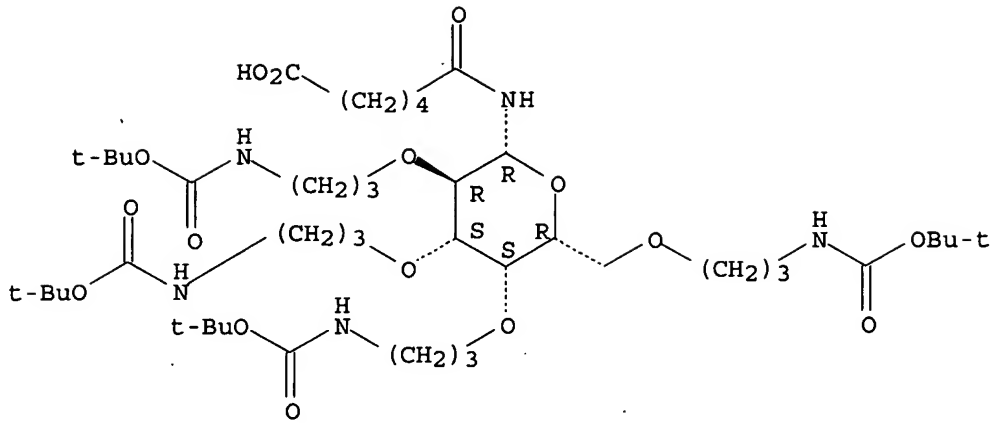
RN 394245-96-6 CAPLUS
CN Hexanoic acid, 6-oxo-6-[[2,3,4,6-tetrakis-O-(2-cyanoethyl)-β-D-galactopyranosyl]amino]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



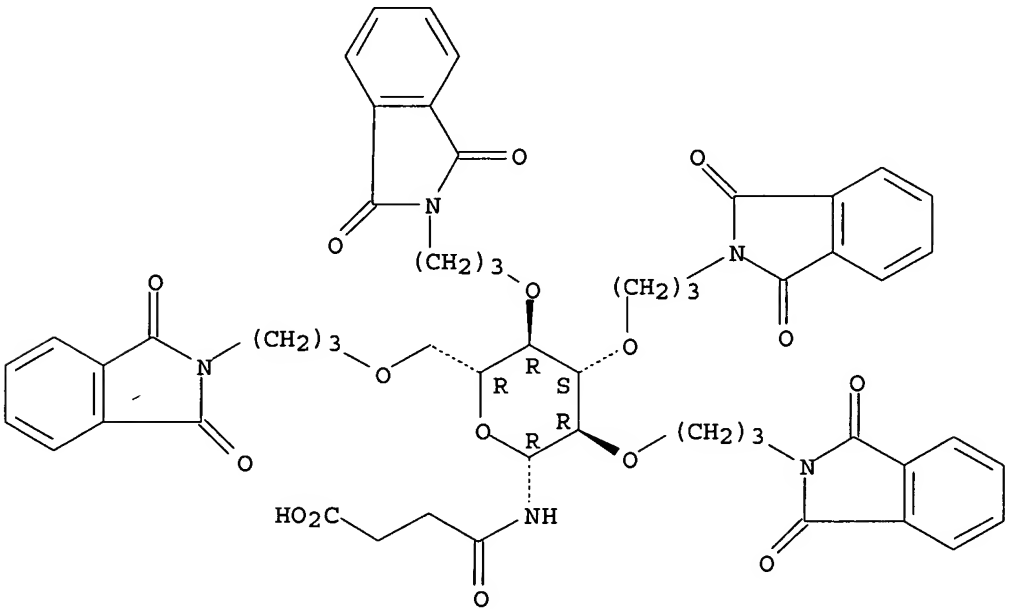
RN 394245-97-7 CAPLUS
CN Hexanoic acid, 6-oxo-6-[[2,3,4,6-tetrakis-O-[3-[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-β-D-galactopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



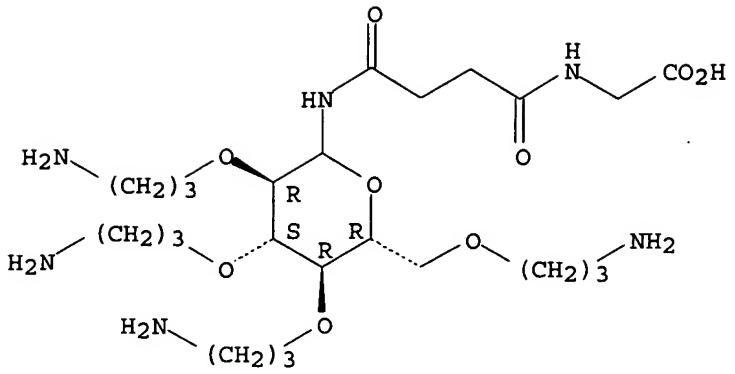
RN 518307-50-1 CAPLUS
CN Butanoic acid, 4-oxo-4-[[2,3,4,6-tetrakis-O-[3-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)propyl]-β-D-glucopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



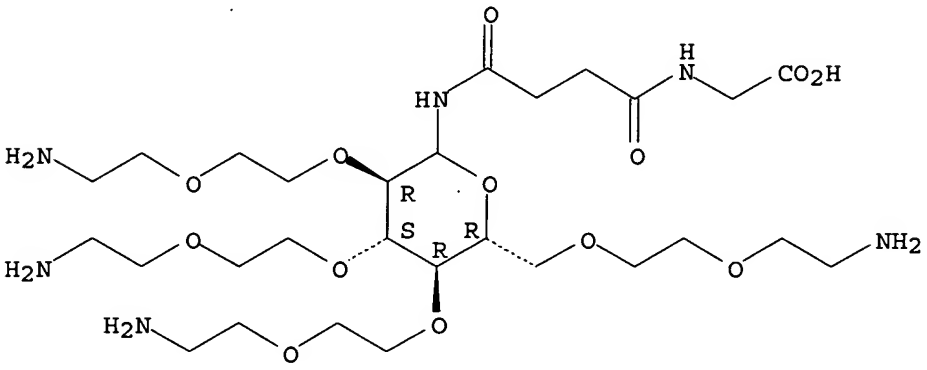
IT **394246-00-5P 394246-01-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(towards synthetic vaccines built on carbohydrate cores)
RN 394246-00-5 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-(3-aminopropyl)-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



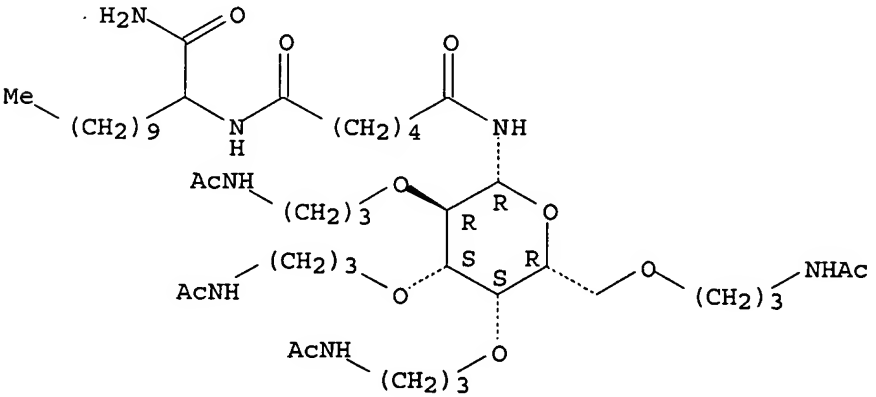
RN 394246-01-6 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-[2-(2-aminoethoxy)ethyl]-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **394246-03-8P**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(towards synthetic vaccines built on carbohydrate cores)
RN 394246-03-8 CAPLUS
CN Hexanediamide, N-[1-(aminocarbonyl)undecyl]-N'-[2,3,4,6-tetrakis-O-[3-(acetylamino)propyl]-β-D-galactopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



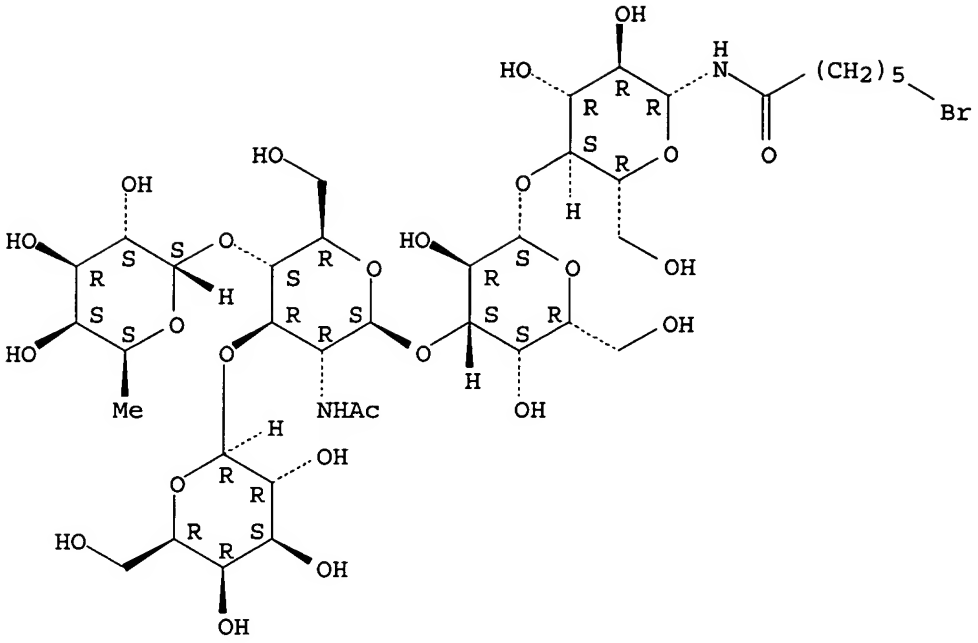
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:502815 CAPLUS
DN 137:77870
TI Vaccine compositions comprising a viral or tumor antigen and a pan DR-binding oligopeptide for inducing humoral immune response against desired determinants
IN Sette, Alessandro; Gaeta, Federico; Grey, Howard M.; Sidney, John; Alexander, Jeffrey L.
PA Epimmune Inc., USA
SO U.S., 43 pp., Cont.-in-part of U.S. 5,736,142.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6413935	B1	20020702	US 1997-788822	19970123
	US 5736142	A	19980407	US 1994-305871	19940914
PRAI	US 1993-121101	B2	19930914		
	US 1994-305871	A2	19940914		
	US 1996-10510P	P	19960124		

AB He present invention provides compns. and methods of inducing immune response in patients. In particular, it provides compns. useful in inducing humoral responses against desired immunogens, particularly polysaccharides. The immunogen is derived from a virus or cancer cell.
IT **194040-04-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(vaccine compns. comprising a viral or tumor antigen and a pan DR-binding oligopeptide for inducing humoral immune response against desired determinants)
RN 194040-04-5 CAPLUS
CN Hexanamide, 6-bromo-N-[O-6-deoxy-α-L-galactopyranosyl-(1→4)-O-[β-D-galactopyranosyl-(1→3)]-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→3)-O-β-D-galactopyranosyl-(1→4)-β-D-glucopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

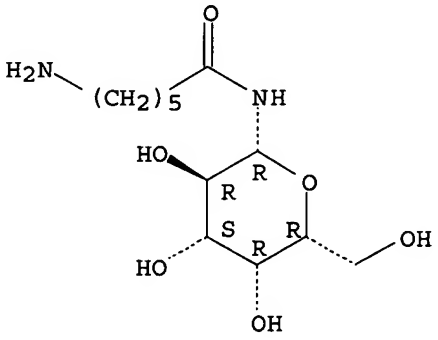


RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:251265 CAPLUS
DN 138:44568
TI Molecular recognition by Kluyveromyces of amphotericin B-loaded, galactose-tagged, poly(lactic acid) microspheres
AU Kassab, Rima; Parrot-Lopez, Helene; Fessi, Hatem; Menaucourt, Jean; Bonaly, Roger; Coulon, Joel
CS UMR 5078 CNRS, Universite Claude Bernard, Villeurbanne, 69622, Fr.
SO Bioorganic & Medicinal Chemistry (2002), 10(6), 1767-1775
CODEN: BMECEP; ISSN: 0968-0896
PB Elsevier Science Ltd.
DT Journal
LA English
AB In an effort to develop a new way of **drug** delivery, especially for polyenic antifungal mols., amphotericin B (AmB) was incorporated into biodegradable galactosylated poly(L-lactic acid) (L-PLA) and poly (L-lactic-co-glycolic acid) (PLGA) microspheres. These **drug** carriers were prepared by solvent evaporation using an oil/water (o/w) emulsion.
The ratio of galactosyl **spacers** with different chain lengths was 1.74-2.78%. The maximal quantity of AmB encapsulated reported to 100 mg of the galactosylated microspheres was 7.14 mg for L-PLA (encapsulation rate 45% of mole) and 6.42 mg for PLGA derivs. (encapsulation rate 81% of mole). In our yeast model, **drug** release depended on three factors: (i) presence of galactosylated antennae, (ii) length of galactosyl antenna and (iii) nature of the polymer. More of the AmB trapped in PLGA microspheres was released than from PLA microspheres. These novel functionalized microspheres could be required for the delivering of therapeutic agents according to their recognition to specific cells.
IT **38822-56-9D**, glycolic-lactic copolymer derivs. **263762-46-5** **263762-47-6** **478826-55-0** **478826-56-1** **478826-57-2**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mol. recognition of amphotericin B-loaded, galactose-tagged, poly(lactic acid) microspheres by Kluyveromyces)

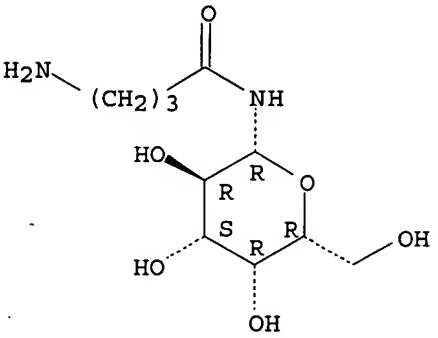
RN 38822-56-9 CAPLUS
CN Hexanamide, 6-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



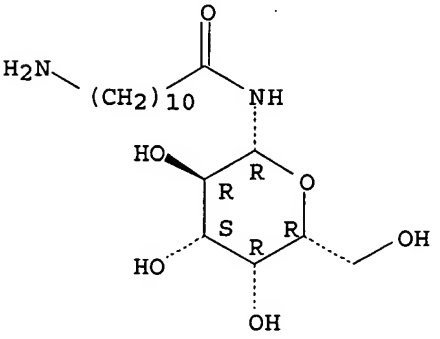
RN 263762-46-5 CAPLUS
CN Butanamide, 4-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

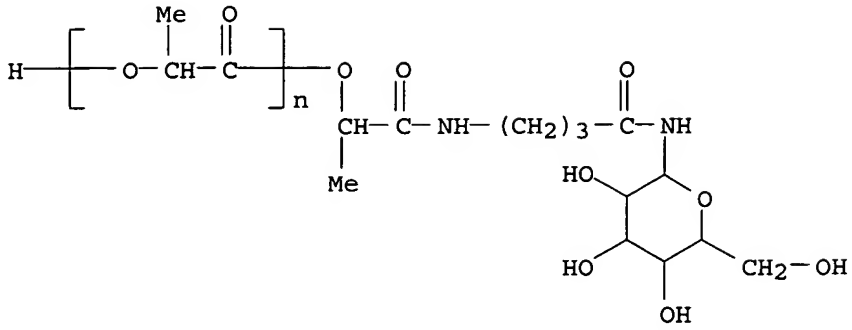


RN 263762-47-6 CAPLUS
CN Undecanamide, 11-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

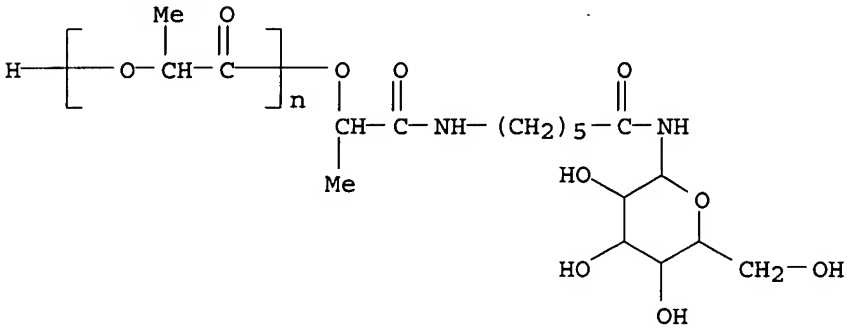
Absolute stereochemistry.



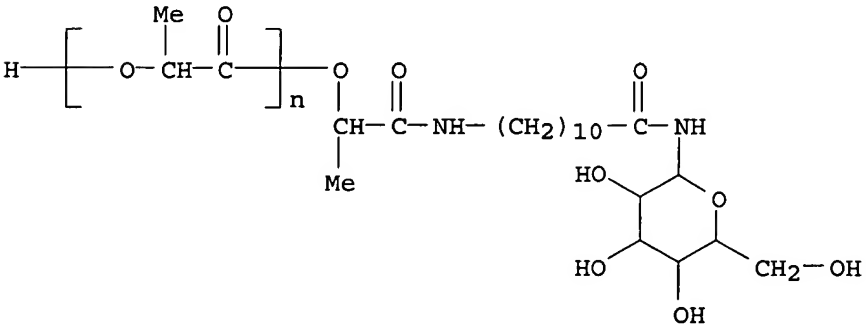
RN 478826-55-0 CAPLUS
CN Poly[oxy[(1S)-1-methyl-2-oxo-1,2-ethanediyl]], α-hydro-ω-[(1S)-2-[[4-(β-D-galactopyranosylamino)-4-oxobutyl]amino]-1-methyl-2-oxoethoxy]- (9CI) (CA INDEX NAME)



RN 478826-56-1 CAPLUS
CN Poly[oxy[(1S)-1-methyl-2-oxo-1,2-ethanediyl]], α-hydro-ω-[(1S)-2-[[6-(β-D-galactopyranosylamino)-6-oxohexyl]amino]-1-methyl-2-oxoethoxy]- (9CI) (CA INDEX NAME)



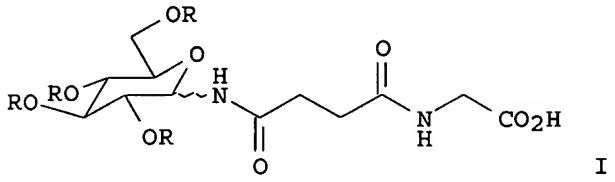
RN 478826-57-2 CAPLUS
CN Poly[oxy[(1S)-1-methyl-2-oxo-1,2-ethanediyl]], α-hydro-ω-[(1S)-2-[[11-(β-D-galactopyranosylamino)-11-oxoundecyl]amino]-1-methyl-2-oxoethoxy]- (9CI) (CA INDEX NAME)



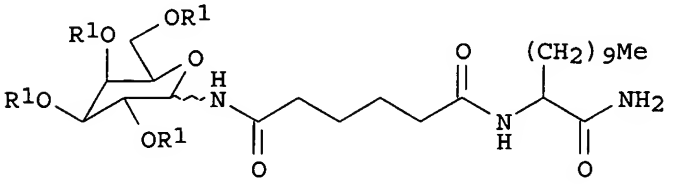
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:749906 CAPLUS
DN 136:151403
TI Carbohydrate-based templates for synthetic vaccines and **drug** delivery
AU McGeary, R. P.; Jablonkai, I.; Toth, I.
CS The University of Queensland, School of Pharmacy, Brisbane, 4072,

Australia
SO Tetrahedron (2001), 57(41), 8733-8742
CODEN: TETRAB; ISSN: 0040-4020
PB Elsevier Science Ltd.
DT Journal
LA English
OS CASREACT 136:151403
GI



I



II

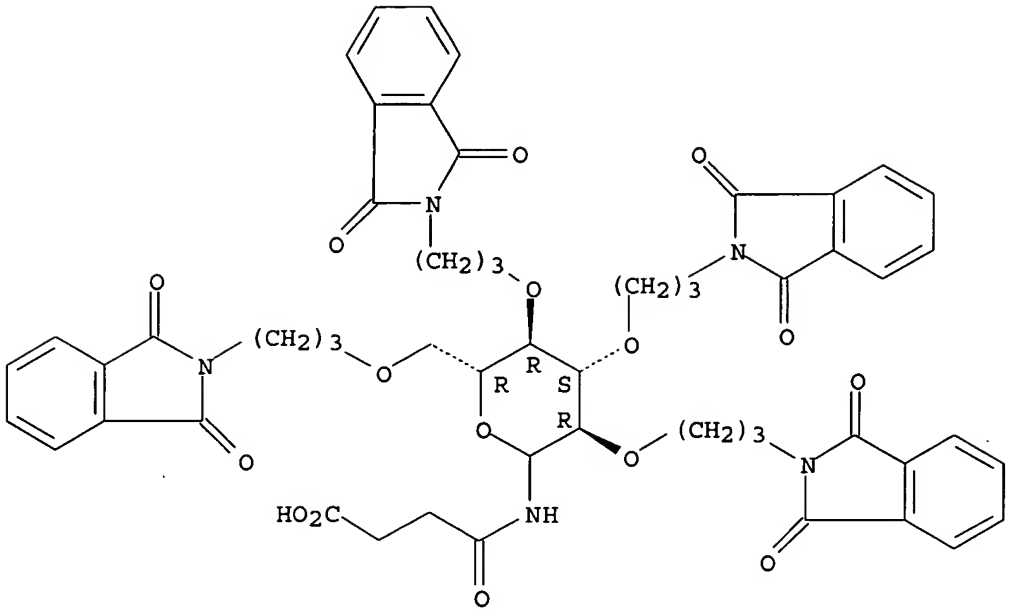
AB Me tetra-O-allyl and tetra-O-[5-(tetrahydro-2H-pyranyloxy)-3-oxapentyl] glucosides, and tetra-O-(cyanoethyl)galactosyl azide were converted into derivs. containing **linkers** with terminal carboxylic acid functionalities at the anomeric position and bearing four arms with phthaloyl- or BOC-protected terminal amino groups. Thus, glucosylamides I [R = (CH2)3NH2, (CH2)2O(CH2)2NH2] and galactosylamides II [R1 = (CH2)3NHCOMe] were obtained as final products. I and II are suitable for use in solid-phase peptide synthesis and for the preparation of dendrimers containing multiple copies of peptides.

IT **394245-88-6P 394245-94-4P 394245-96-6P**
394245-97-7P 394245-98-8DP, resin-bound
394245-99-9DP, resin-bound **394246-02-7DP**, resin-bound
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of carbohydrate-based templates for use in solid-phase peptide synthesis for designing synthetic vaccines and **drug** delivery)

RN 394245-88-6 CAPLUS

CN Butanoic acid, 4-oxo-4-[[2,3,4,6-tetrakis-O-[3-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)propyl]-D-glucopyranosyl]amino]- (9CI) (CA INDEX NAME)

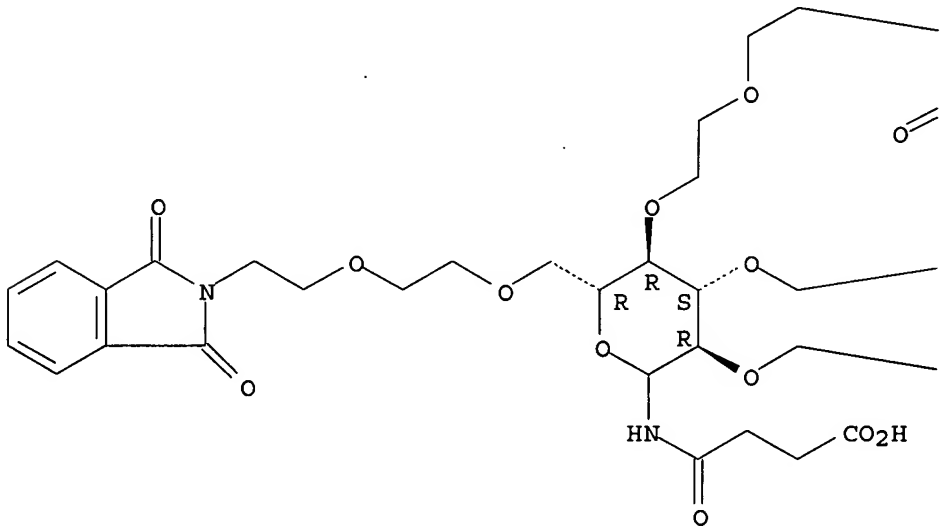
Absolute stereochemistry.

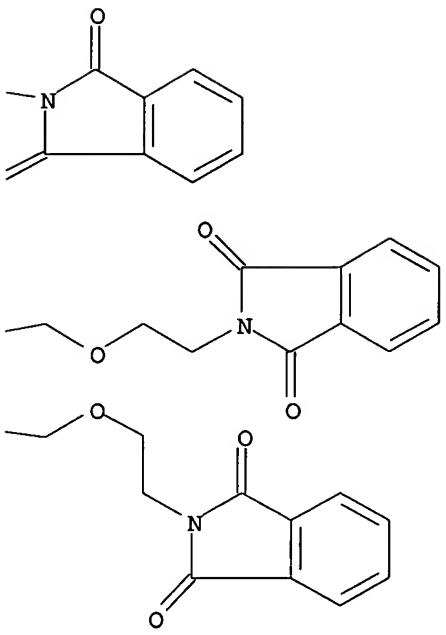


RN 394245-94-4 CAPLUS
CN Butanoic acid, 4-oxo-4-[[2,3,4,6-tetrakis-O-[2-[2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethoxy]ethyl]-D-glucopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

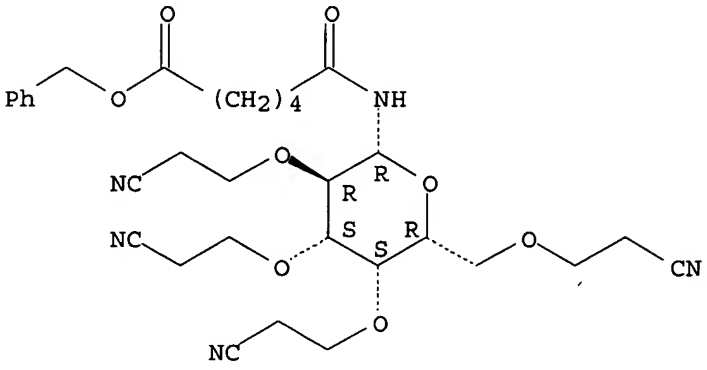
PAGE 1-A





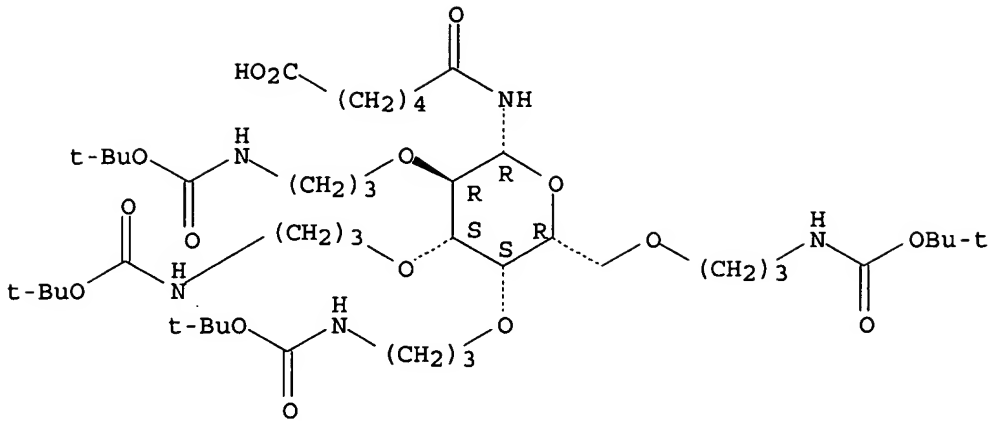
RN 394245-96-6 CAPLUS
CN Hexanoic acid, 6-oxo-6-[[2,3,4,6-tetrakis-O-(2-cyanoethyl)-β-D-galactopyranosyl]amino]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



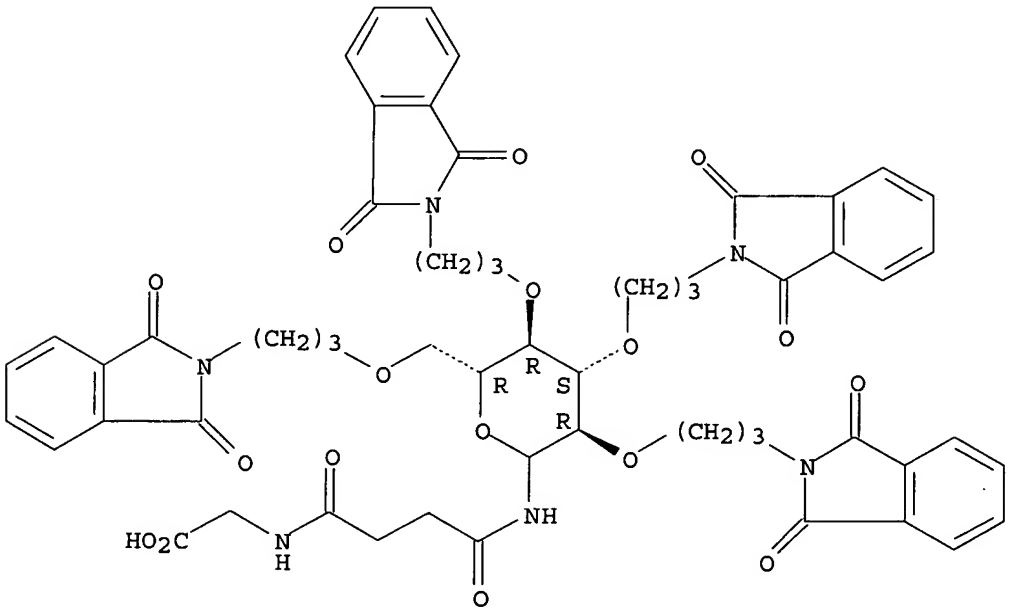
RN 394245-97-7 CAPLUS
CN Hexanoic acid, 6-oxo-6-[[2,3,4,6-tetrakis-O-[3-[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-β-D-galactopyranosyl]amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 394245-98-8 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-[3-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)propyl]-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

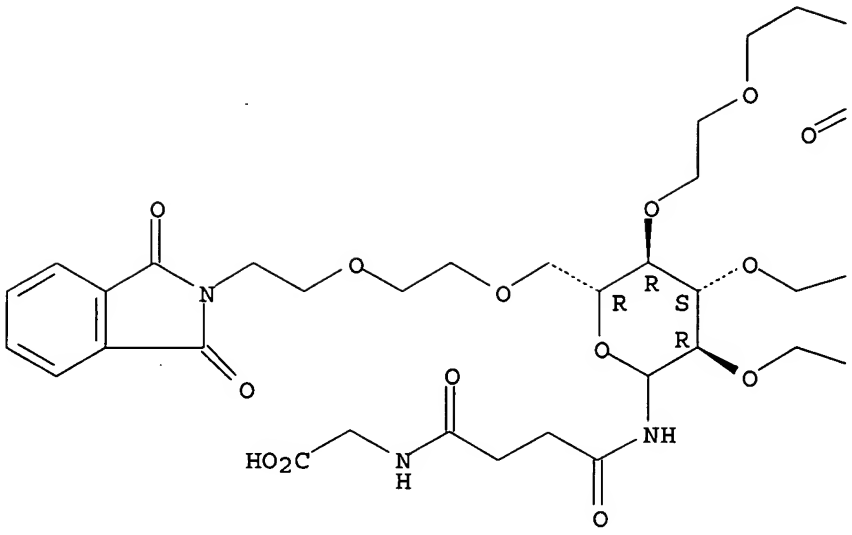
Absolute stereochemistry.



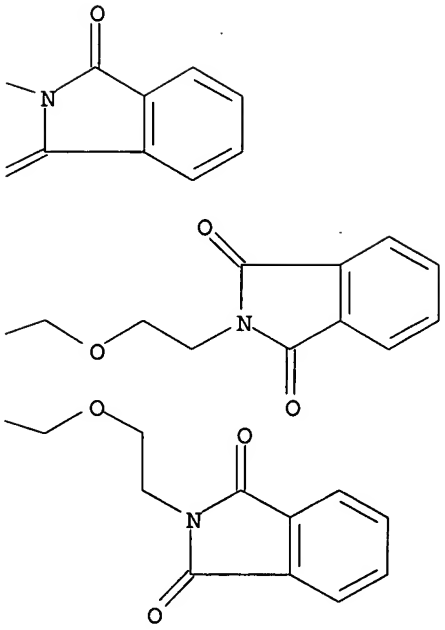
RN 394245-99-9 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-[2-[2-(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)ethoxy]ethyl]-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

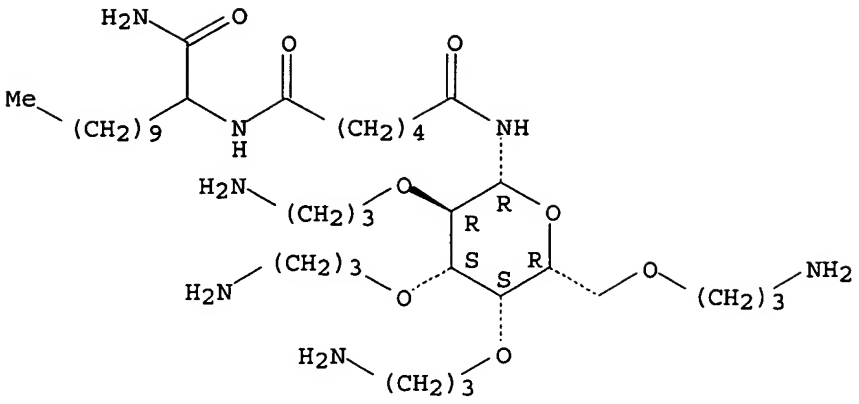


PAGE 1-B



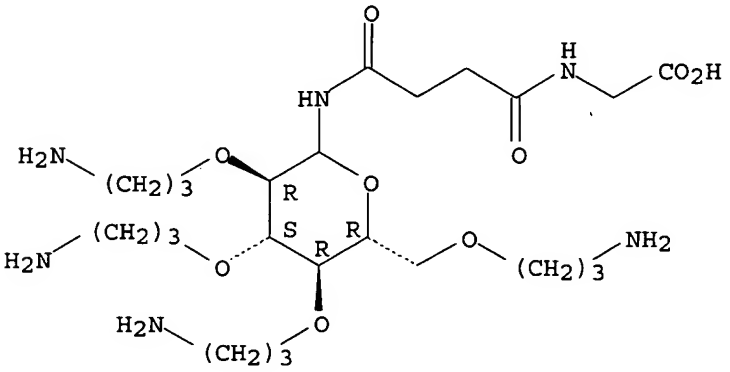
RN 394246-02-7 CAPLUS
CN Hexanediamide, N-[1-(aminocarbonyl)undecyl]-N'-[2,3,4,6-tetrakis-O-(3-aminopropyl)-β-D-galactopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



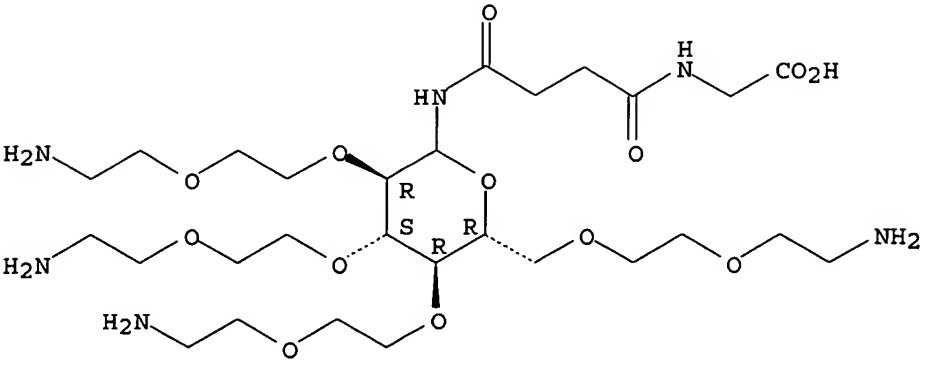
IT **394246-00-5P 394246-01-6P 394246-03-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of carbohydrate-based templates for use in solid-phase peptide synthesis for designing synthetic vaccines and **drug** delivery)
RN 394246-00-5 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-(3-aminopropyl)-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 394246-01-6 CAPLUS
CN Glycine, N-[1,4-dioxo-4-[[2,3,4,6-tetrakis-O-[2-(2-aminoethoxy)ethyl]-D-glucopyranosyl]amino]butyl]- (9CI) (CA INDEX NAME)

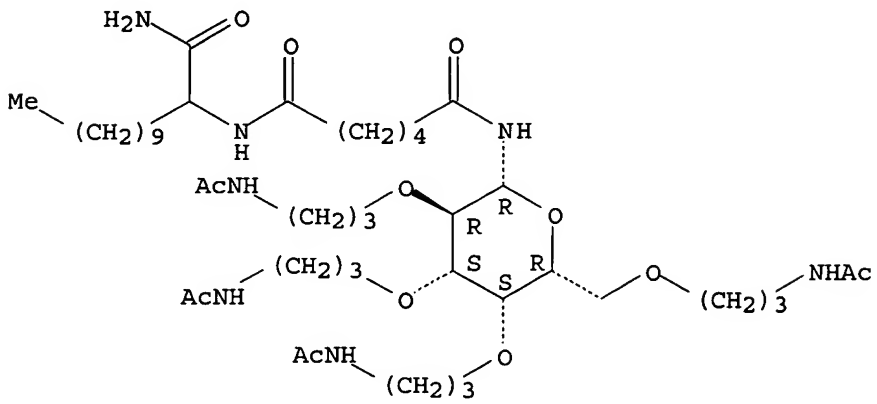
Absolute stereochemistry.



RN 394246-03-8 CAPLUS
CN Hexanediamide, N-[1-(aminocarbonyl)undecyl]-N'-[2,3,4,6-tetrakis-O-[3-

(acetylamino)propyl]-β-D-galactopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:617869 CAPLUS
DN 135:200446
TI Methods and polymer compositions for gene delivery
IN Lollo, Charles Peter; Banaszczyk, Mariusz; Chiou, Henry C.; Wu, Dongpei; Mullein, Patricia M.; Carlo, Alison T.
PA The Immune Response Corporation, USA
SO PCT Int. Appl., 115 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

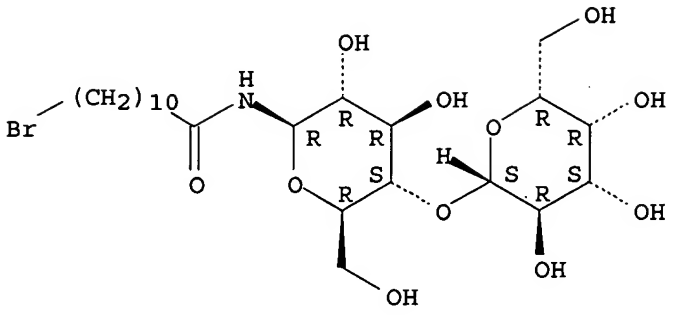
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001060415	A1	20010823	WO 2001-US5234	20010216
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2003134420	A1	20030717	US 2002-211214	20020802
PRAI	US 2000-183516P	P	20000218		
	WO 2001-US5234	A1	20010216		

AB The present invention provides novel compns. and formulations for delivering anionic compds., particularly polynucleotides (DNA and RNA), across cellular boundaries (e.g., cellular membranes) either in vivo or in vitro. Thus, polylysine-graft PEG was allowed to react with 4-hydroxybenzylimino Me ester-HCl in MeOH and water. The compds. can be used as fluorescent probes.

IT **356063-65-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(polymer compns. for gene delivery)

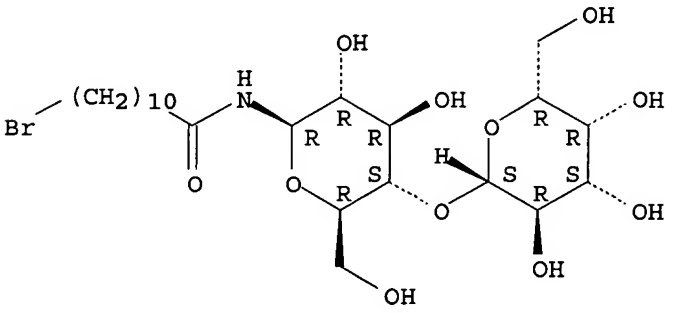
RN 356063-65-5 CAPLUS
CN Undecanamide, 11-bromo-N-(4-O-β-D-galactopyranosyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **356063-65-5DP**, reaction products with graft polylysine copolymers
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(polymer compns. for gene delivery)
RN 356063-65-5 CAPLUS
CN Undecanamide, 11-bromo-N-(4-O-β-D-galactopyranosyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:209948 CAPLUS
DN 132:255952
TI Cationic dendrimers and their use as macromolecular carriers
IN Florence, Alexander T.; Wilderspin, Andrew F.; Toth, Istvan; Sakthivel, Thiagarajan; Bayele, Henry K.
PA School of Pharmacy, University of London, UK
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000016807	A1	20000330	WO 1999-GB3189	19990923
	W: GB, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1115428	A1	20010718	EP 1999-947667	19990923
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002526456	T2	20020820	JP 2000-573768	19990923

PRAI EP 1998-307712 A 19980923
GB 1999-21478 A 19990910
WO 1999-GB3189 W 19990923

AB Dendrimers comprising a dendritic polypeptide with one dendron having terminal cationic groups and a **lipid** anchor, preferably comprising C6-24-alkyl group containing α-amino acyl groups, preferably joined to the focal group, are used to assist transfection of cells in vitro and in vivo by DNA. The complex of dendrimer and DNA may be used in gene therapy, for instance to delivery clotting factor genes to cells.

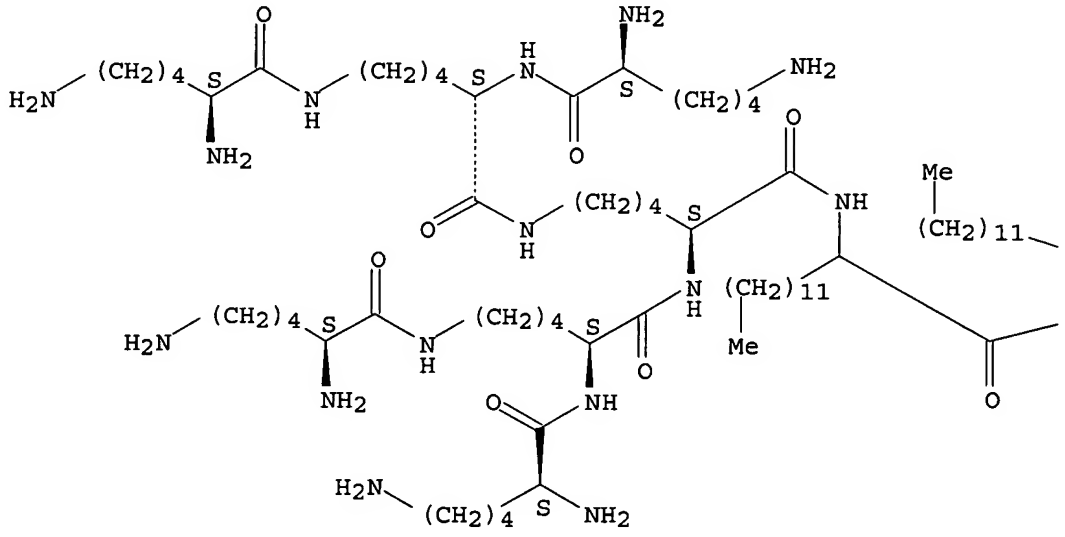
IT **262587-07-5P 262587-08-6P**
RL: BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(cationic dendrimers and their use as macromol. carriers)

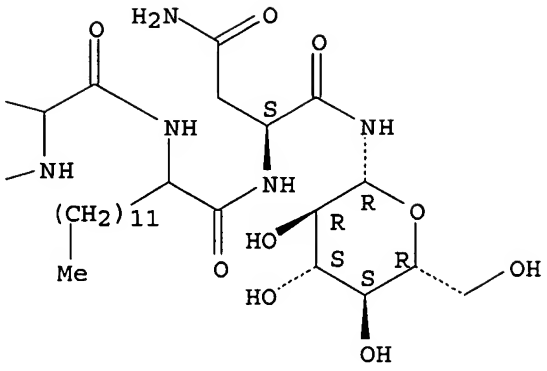
RN 262587-07-5 CAPLUS

CN L-Aspartamide, N2,N6-bis(N2,N6-di-L-lysyl-L-lysyl)-L-lysyl-2-aminotetradecanoyl-2-aminotetradecanoyl-2-aminotetradecanoyl-N1-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





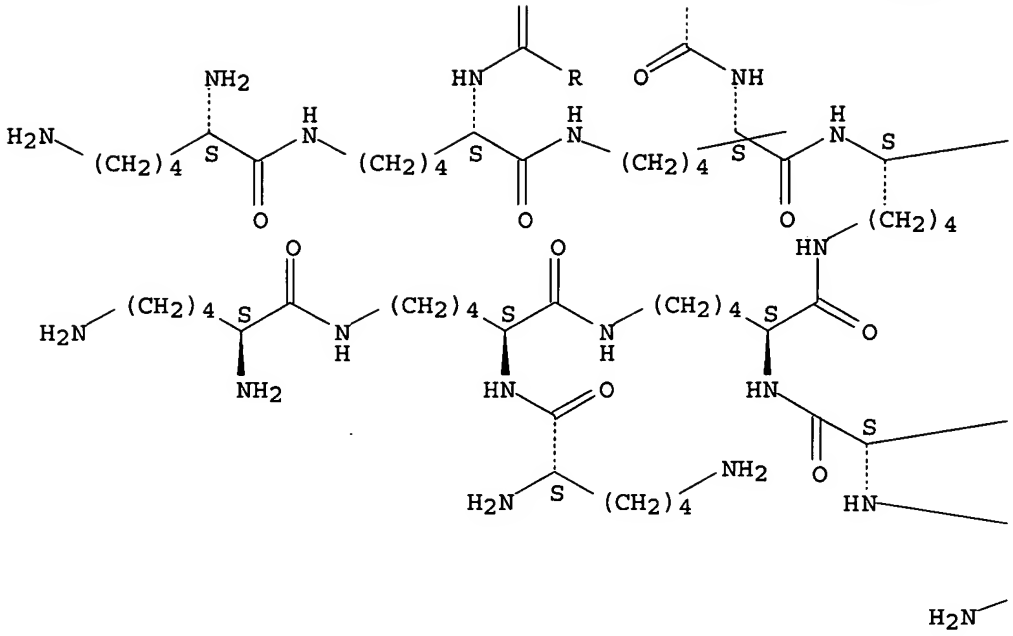
RN 262587-08-6 CAPLUS
CN L-Aspartamide, N2,N6-bis[N2,N6-bis(N2,N6-di-L-lysyl-L-lysyl)-L-lysyl]-L-lysyl-2-aminotetradecanoyl-2-aminotetradecanoyl-2-aminotetradecanoyl-N1-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

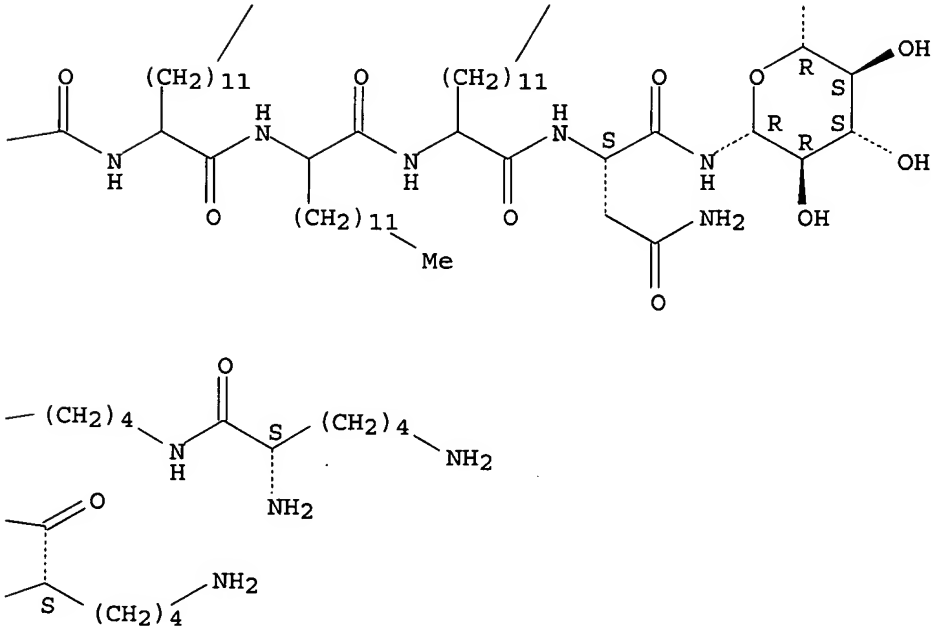
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PAGE 1-B

PAGE 2-A



PAGE 2-B

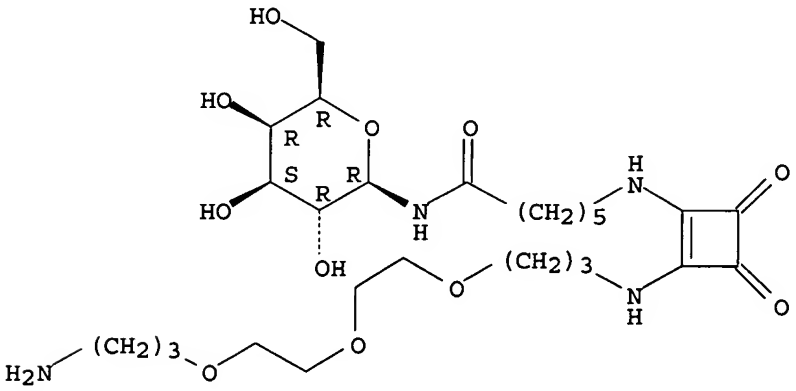


RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:142691 CAPLUS
DN 132:302964
TI High-Affinity Pentavalent Ligands of Escherichia coli Heat-Labile Enterotoxin by Modular Structure-Based Design
AU Fan, Erkang; Zhang, Zhongsheng; Minke, Wendy E.; Hou, Zheng; Verlinde, Christophe L. M. J.; Hol, Wim G. J.

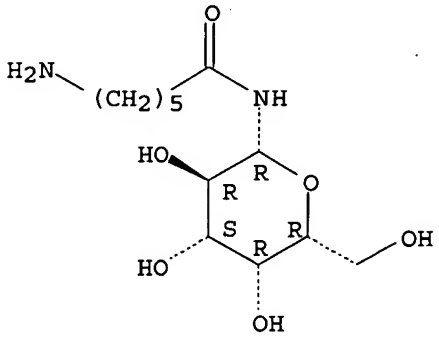
CS Department of Biological Structure Biomolecular Structure Center and Howard Hughes Medical Institute, University of Washington, Seattle, WA, 98195, USA
SO Journal of the American Chemical Society (2000), 122(11), 2663-2664
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
AB The authors present a novel approach toward high-affinity multivalent ligands: a modular design that incorporates structural information of the multiple target sites. Their work focuses on an ideal target model, the heat-labile enterotoxin (LT) from Escherichia coli. The authors demonstrate the power of a modular synthesis procedure which allowed them to explore in detail the effects of **linker** length on affinity. For the core, they chose acylated pentacyclen. Force-field calcns. show that this mol. can adopt a conformation close to 5-fold symmetry. The authors used 1-β-amidated D-galactose as the finger. D-galactose is a terminal sugar unit of LT's natural receptor GM1. It interacts very specifically with the toxin via defined hydrogen bonds and a carbohydrate against tryptophan stacking. The authors have chosen to span a large range of **linker** lengths using the com. available 4,7,10-trioxa-1,13-tridecanediamine as the basic unit of the **linkers**. After obtaining a series of pentavalent ligands with various **linker** lengths, the authors tested their ability to inhibit the binding of LT B pentamer (LT-B5) to ganglioside using an ELISA protocol. The results clearly show that the structure-based design of pentavalent ligands leads to very significant affinity gains compared to the monovalent ligand. The best pentavalent ligand shows an IC50 that is 105-fold better than galactose, the mol. moiety mostly responsible for the affinity of the authors fingers to LT. In summary, the authors modular approach has allowed for efficient synthesis of large mol. weight protein ligands and, for the first time, a systematic study of the effects of flexible-**linker** lengths on the affinities of multivalent ligands.
IT **266000-46-8P**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(high-affinity pentavalent ligands of Escherichia coli heat-labile enterotoxin by modular structure-based design using acylated pentacyclen as the core and galactose as the finger)
RN 266000-46-8 CAPLUS
CN Hexanamide, 6-[[2-[[3-[2-[2-(3-aminopropoxy)ethoxy]ethoxy]propyl]amino]-3,4-dioxo-1-cyclobuten-1-yl]amino]-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



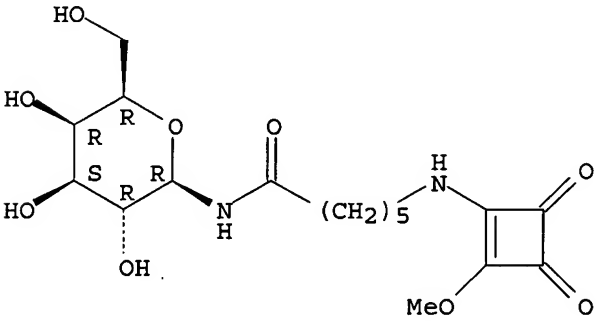
IT **38822-56-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(high-affinity pentavalent ligands of Escherichia coli heat-labile enterotoxin by modular structure-based design using acylated pentacyclen as the core and galactose as the finger)
RN 38822-56-9 CAPLUS
CN Hexanamide, 6-amino-N-β-D-galactopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **266000-50-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(high-affinity pentavalent ligands of Escherichia coli heat-labile enterotoxin by modular structure-based design using acylated pentacyclen as the core and galactose as the finger)
RN 266000-50-4 CAPLUS
CN Hexanamide, N-β-D-galactopyranosyl-6-[(2-methoxy-3,4-dioxo-1-cyclobuten-1-yl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



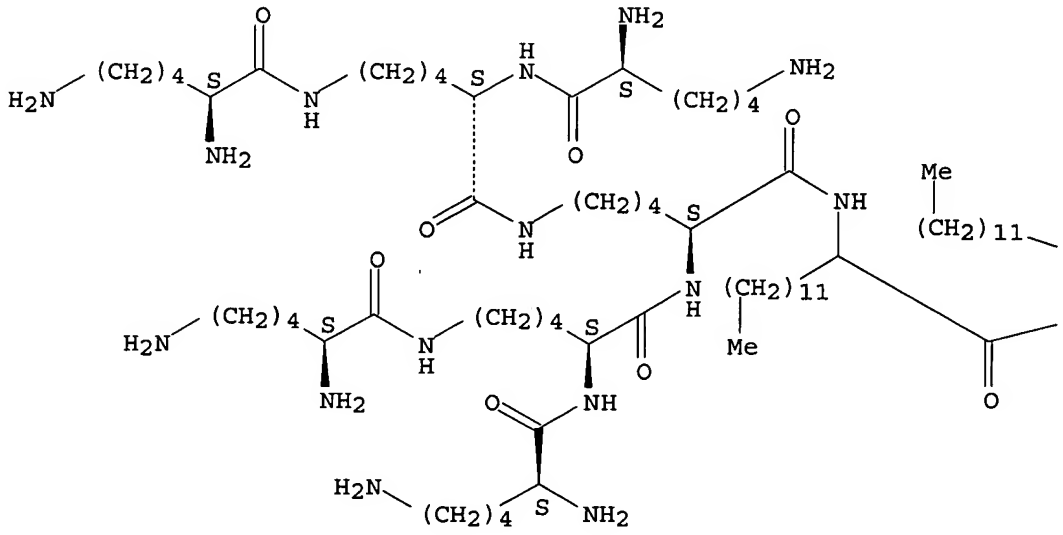
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

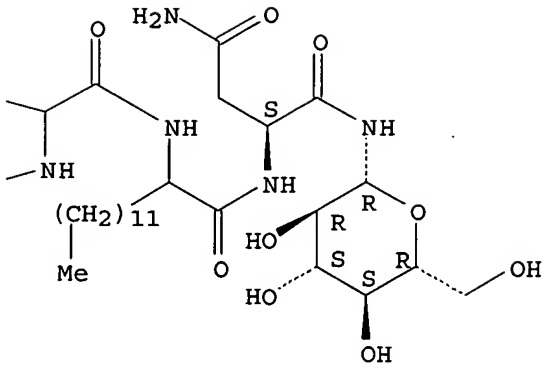
L5 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:653455 CAPLUS
DN 132:227244
TI Novel cationic **lipid** peptide dendrimer vectors. In vitro gene delivery
AU Toth, I.; Sakthivel, T.; Wilderspin, A. F.; Bayele, H.; O'Donnell, M.; Perry, D. J.; Pasi, K. J.; Lee, C. A.; Florence, A. T.
CS Department of Pharmaceutical and Biological Chemistry, The School of Pharmacy, University of London, London, WC 1N 1AX, UK
SO S.T.P. Pharma Sciences (1999), 9(1), 93-99
CODEN: STSSE5; ISSN: 1157-1489
PB Editions de Sante

DT Journal
LA English
AB Cationic **lipid** dendrimers with a well-defined diameter and a precise number of terminal amines (8-32 groups) were synthesized using a solid support. The application of dendrimers with widely varied geometries in gene delivery has been studied by estimating transfection efficiency of members of the series, with variable branch length, position of attachment of **lipid**, the presence of a sugar unit and presence of a nuclear localization signal peptide. The transfection activity of the products was assayed in vitro on Cos-7 (fibroblast) cells. Two dendrimers displayed high transfection activities. Results indicated that the presence of more amino groups on the surface of the dendrimers could enhance gene delivery. A primary physicochem. characterization of the DNA/**lipid** complexes demonstrated the min. amount of dendrimer required for the transfection of 2.5 μg plasmid (10 μg/mL for the dendrimers with eight free amino terminals and 5 and 2.5 μg/mL for the dendrimers with 16 and 32 free amino terminals, resp.).
IT **262587-07-5P 262587-08-6P**
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(cationic **lipid** peptide dendrimer vectors for in vitro gene delivery)
RN 262587-07-5 CAPLUS
CN L-Aspartamide, N2,N6-bis(N2,N6-di-L-lysyl-L-lysyl)-L-lysyl-2-aminotetradecanoyl-2-aminotetradecanoyl-2-aminotetradecanoyl-N1-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





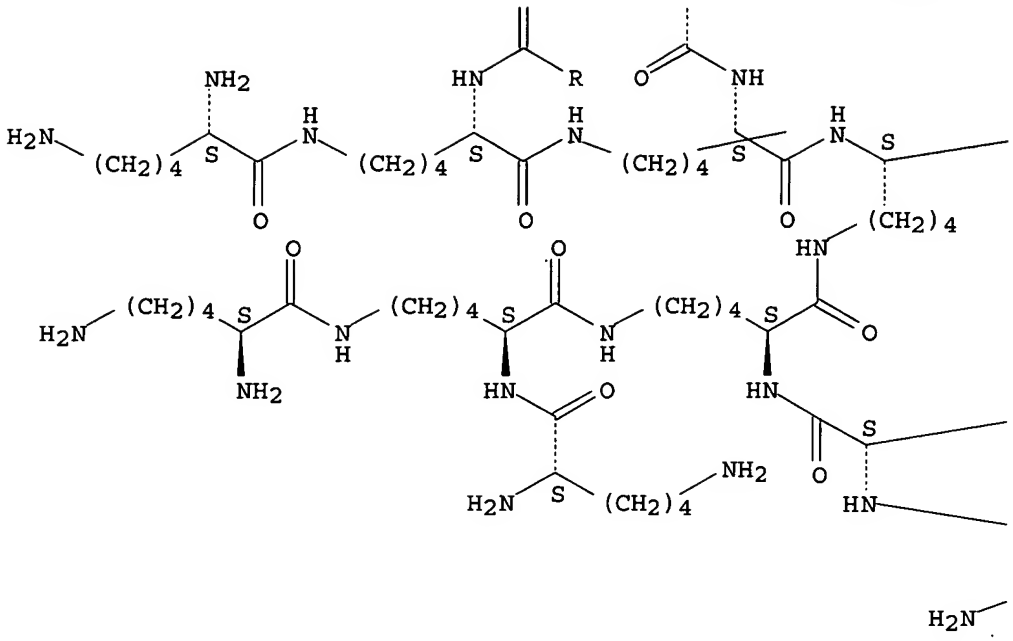
RN 262587-08-6 CAPLUS
CN L-Aspartamide, N2,N6-bis[N2,N6-bis(N2,N6-di-L-lysyl-L-lysyl)-L-lysyl]-L-lysyl-2-aminotetradecanoyl-2-aminotetradecanoyl-2-aminotetradecanoyl-N1-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

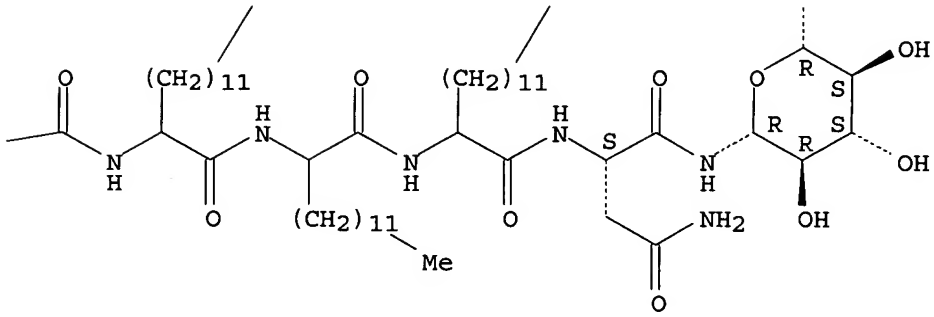
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

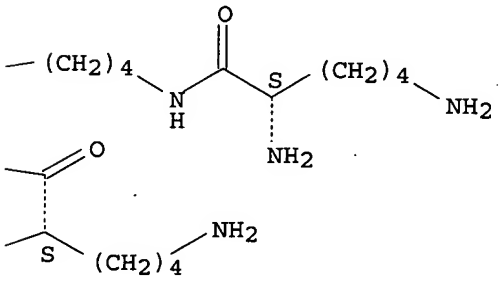
PAGE 1-B

PAGE 2-A



PAGE 2-B





RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:562089 CAPLUS
DN 131:331722
TI Novel Lipoamino Acid- and Liposaccharide-Based System for Peptide Delivery: Application for Oral Administration of Tumor-Selective Somatostatin Analogs
AU Toth, Istvan; Malkinson, John P.; Flinn, Nicholas S.; Drouillat, Bruno;

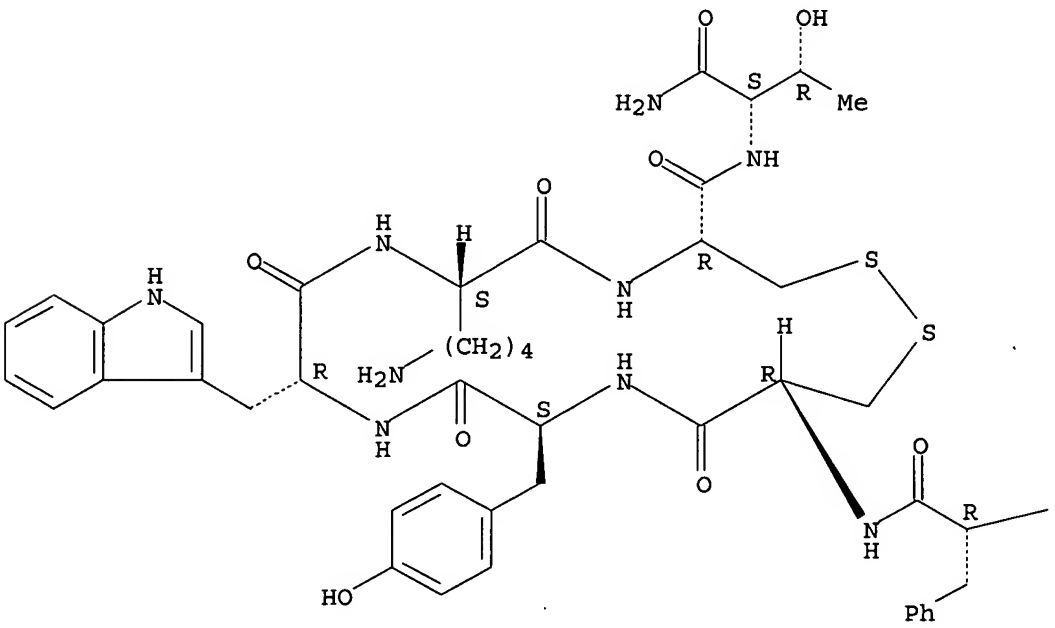
Horvath, Aniko; Erchegyi, Judith; Idei, Miklos; Venetianer, Aniko; Artursson, Per; Lazorova, Lucia; Szende, Bela; Keri, Gyoergy
CS Department of Pharmaceutical and Biological Chemistry The School of Pharmacy, University of London, London, WC1N 1AX, UK
SO Journal of Medicinal Chemistry (1999), 42(19), 4010-4013
CODEN: JMCMAR; ISSN: 0022-2623
PB American Chemical Society
DT Journal
LA English
AB Lipoamino acid and liposaccharide conjugates of somatostatin analog TT-232 were synthesized to modify the physicochem. properties of the parent peptide. The relative position, the number, and the nature of the **lipid** and/or saccharide moieties were varied. Expts. in vitro clearly showed that many compds. modified at the N- and/or C-terminus with **lipid** or sugar moieties retained the biol. activity of the parent compound An interesting construct was synthesized containing **lipid** and sugar units at opposite ends of the somatostatin analog, so that the entire mol. could be considered as an amphipathic surfactant.

IT **250132-08-2P 250132-14-0P 250132-16-2P**
250132-17-3P 250132-18-4P
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC (Process)
(lipoamino acid- and liposaccharide-based system for application for oral administration of tumor-selective somatostatin analogs)

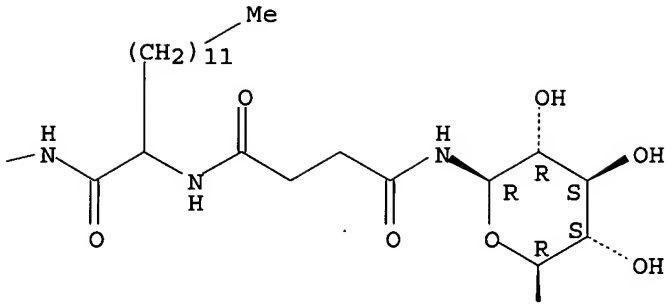
RN 250132-08-2 CAPLUS
CN L-Threoninamide, 2-[[4-(β-D-glucopyranosylamino)-1,4-dioxobutyl]amino]tetradecanoyl-D-phenylalanyl-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-L-cysteinyl-, cyclic (3→7)-disulfide (9CI) (CA INDEX NAME)

Absolute stereochemistry.

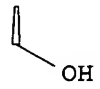
PAGE 1-A



PAGE 1-B



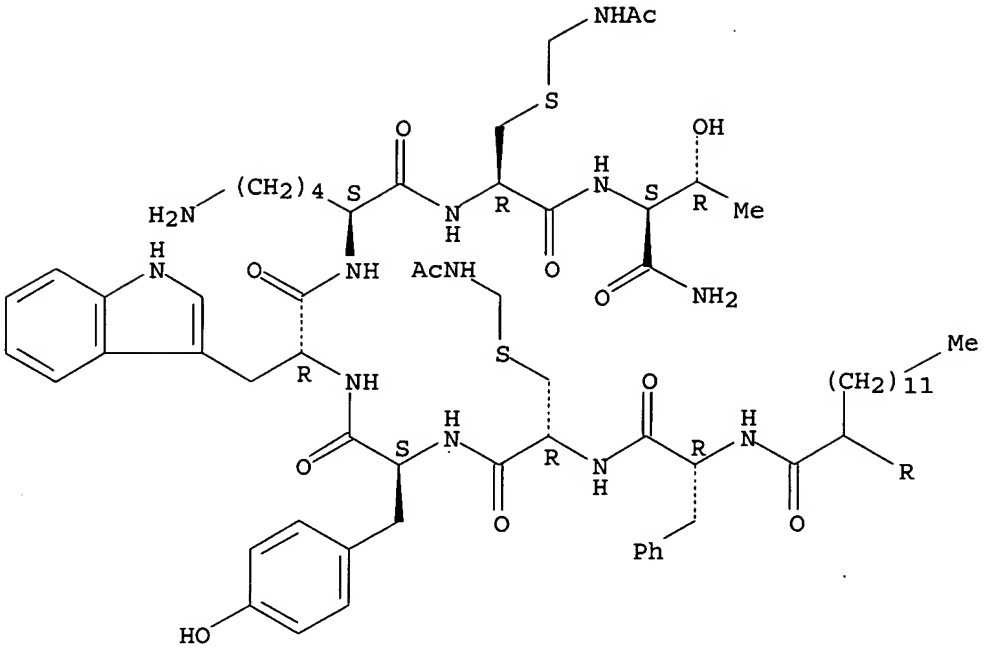
PAGE 2-B



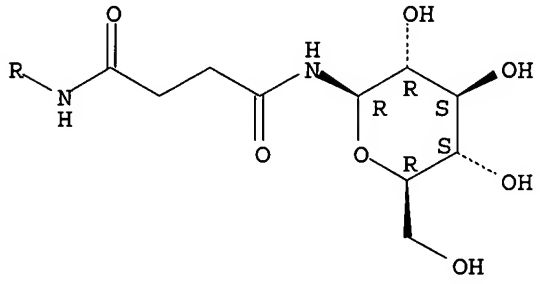
RN 250132-14-0 CAPLUS
CN L-Threoninamide, 2-[[4-(β-D-glucopyranosylamino)-1,4-dioxobutyl]amino]tetradecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

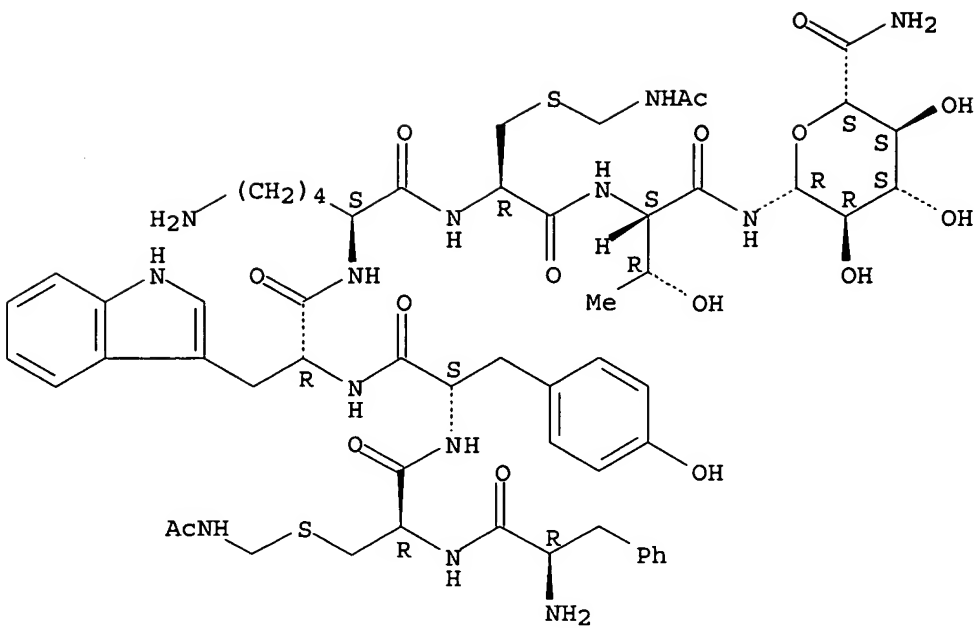


PAGE 2-A



RN 250132-16-2 CAPLUS
CN L-Threoninamide, D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl-N-β-D-glucopyranuronamidosyl- (9CI) (CA INDEX NAME)

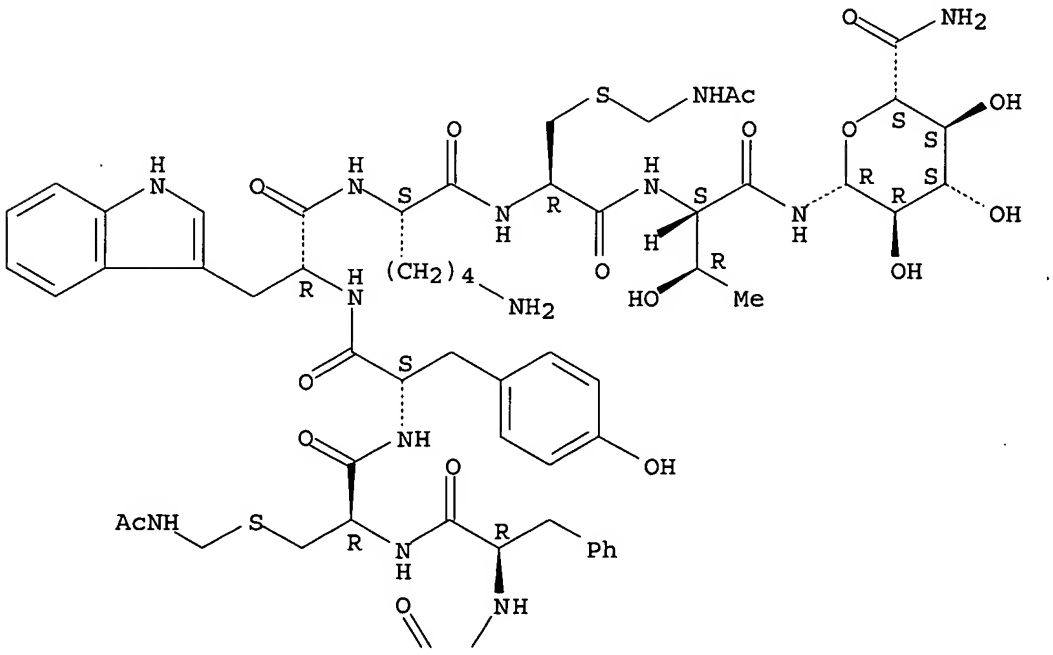
Absolute stereochemistry.



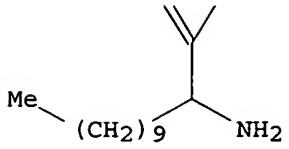
RN 250132-17-3 CAPLUS
CN L-Threoninamide, 2-aminododecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl-N-β-D-glucopyranuronamidosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



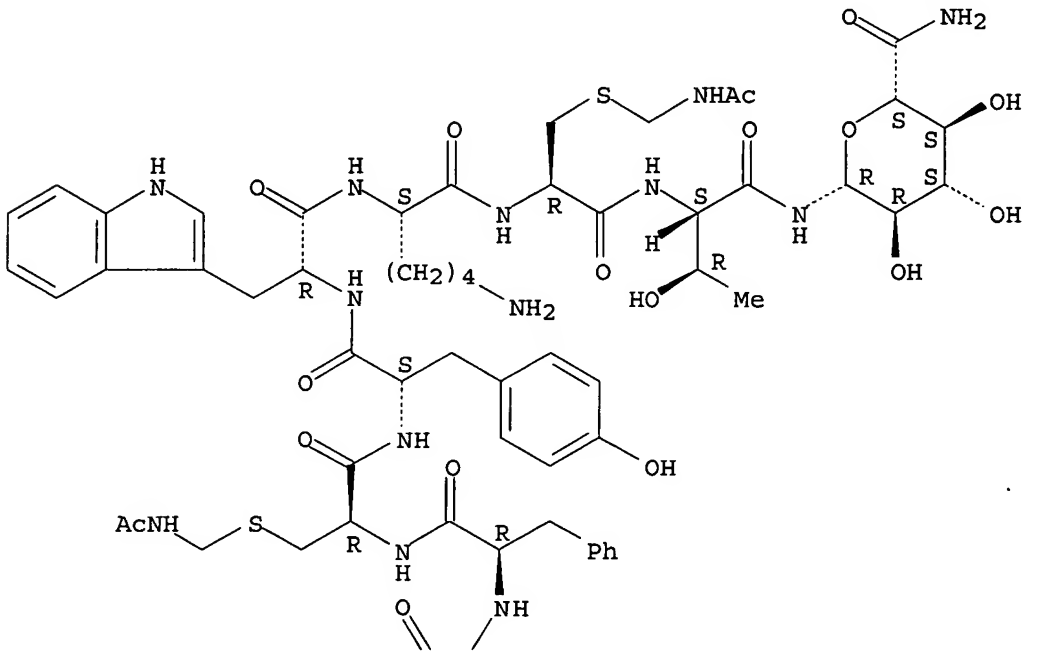
PAGE 2-A



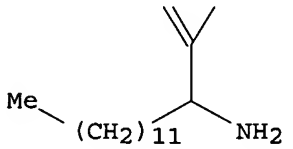
RN 250132-18-4 CAPLUS
CN L-Threoninamide, 2-aminotetradecanoyl-D-phenylalanyl-S-[(acetylamino)methyl]-L-cysteinyl-L-tyrosyl-D-tryptophyl-L-lysyl-S-[(acetylamino)methyl]-L-cysteinyl-N-β-D-glucopyranuronamidosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A

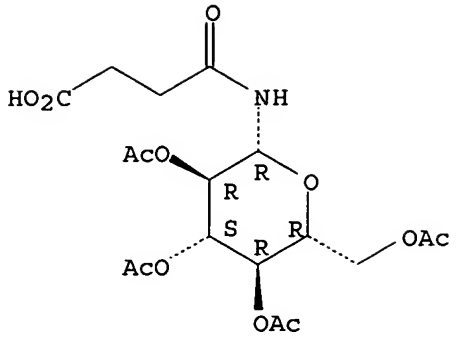


PAGE 2-A



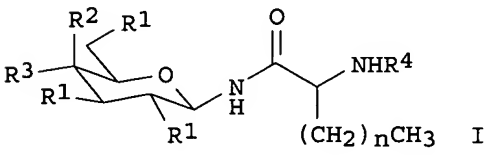
IT **205442-82-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(lipoamino acid- and liposaccharide-based system for application for oral administration of tumor-selective somatostatin analogs)
RN 205442-82-6 CAPLUS
CN Butanoic acid, 4-oxo-4-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



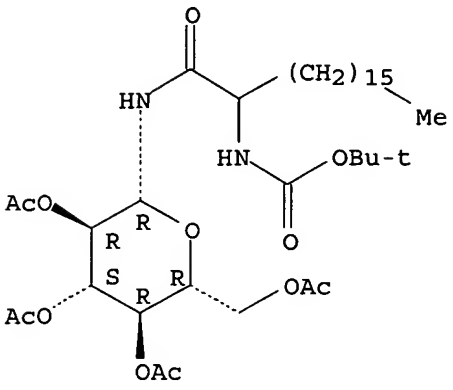
RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:597694 CAPLUS
DN 129:331004
TI Novel carbohydrate-lipoamino acid/peptide conjugates for **drug** and peptide delivery
AU Dekany, Gyula; Falconer, Robert; Drouillat, Bruno; Wright, Karen; Toth, Istvan
CS Department of Pharmaceutical and Biological Chemistry, The School of Pharmacy, University of London, London, WC1N 1AX, UK
SO Peptides 1996, Proceedings of the European Peptide Symposium, 24th, Edinburgh, Sept. 8-13, 1996 (1998), Meeting Date 1996, 331-332. Editor(s): Ramage, Robert; Epton, Roger. Publisher: Mayflower Scientific, Kingswinford, UK.
CODEN: 66RCA5
DT Conference
LA English
GI



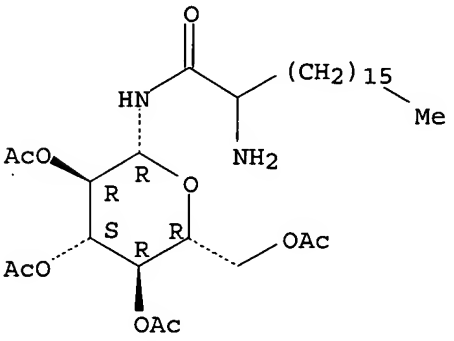
AB A symposium report on the preparation of sugar-**lipid** conjugates, e.g. I [n = 13, 15; R1 = OAc, OH; R2 = H, OAc; R3 = H, OAc, R4 = H, CO2CMe3 (Boc)], by coupling amino sugars with Boc-protected lipoamino acids and oligomers. The physicochem. properties of the conjugates were modified by varying the nature and number of sugars, the number of lipoamino acids, or the length of the alkyl chain. The prepared compds. will be coupled to peptides and **drugs**. The sugar conjugation will be used not only to enhance water solubility in **drug** delivery, but to target the constructs and increase synthetic peptide immunogenicity.
IT **199448-57-2P 199448-58-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of carbohydrate-lipoamino acid and -lipopeptide conjugates for **drug** and peptide delivery)
RN 199448-57-2 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



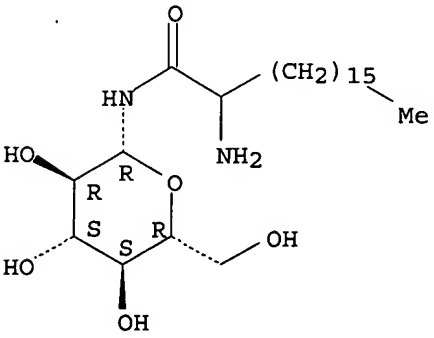
RN 199448-58-3 CAPLUS
CN Octadecanamide, 2-amino-N-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



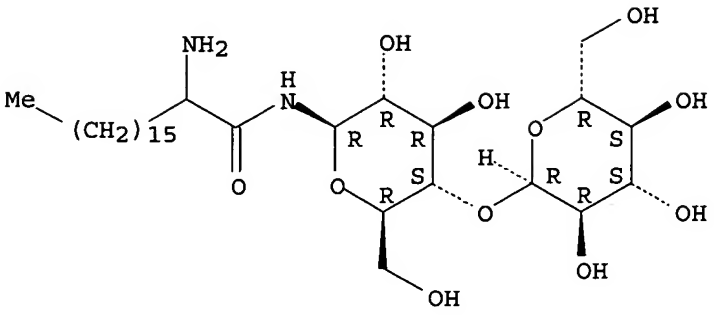
IT **192385-41-4P 192385-43-6P 215254-45-8P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of carbohydrate-lipoamino acid and -lipopeptide conjugates for **drug** and peptide delivery)
RN 192385-41-4 CAPLUS
CN Octadecanamide, 2-amino-N-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



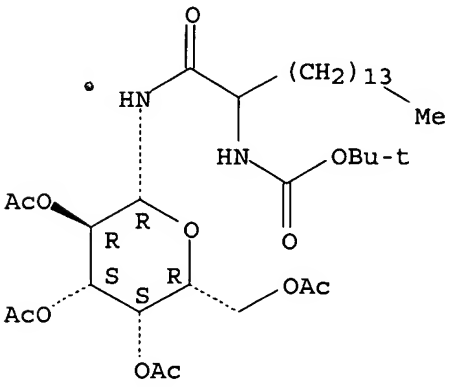
RN 192385-43-6 CAPLUS
CN Octadecanamide, 2-amino-N-(4-O-α-D-glucopyranosyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 215254-45-8 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)amino]carbonyl]pentadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

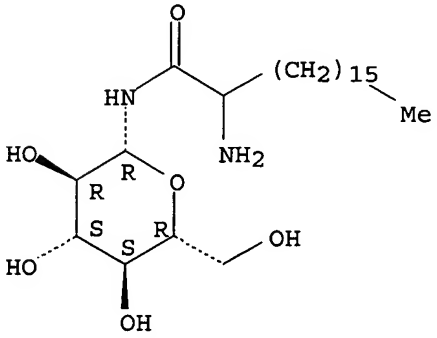
L5 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:786483 CAPLUS
DN 128:26805
TI Novel Liposaccharide Conjugates for **Drug** and Peptide Delivery
AU Drouillat, Bruno; Hillery, Anya M.; Dekany, Gyula; Falconer, Robert; Wright, Karen; Toth, Istvan
CS Department of Pharmaceutical and Biological Chemistry School of Pharmacy, University of London, London, WC1N 1AX, UK
SO Journal of Pharmaceutical Sciences (1998), 87(1), 25-30
CODEN: JPMSAE; ISSN: 0022-3549
PB American Chemical Society
DT Journal
LA English
AB Sugar-**lipid** conjugates were prepared by coupling amino sugars with N-Boc-protected lipoamino acids and oligomers. Conjugates were also prepared from glucuronic acid and Me 2-aminohexadecanoate. The physicochem. properties of the conjugates were modified by varying the nature and number of sugars or the number of lipoamino acids or their alkyl chain length. The ability of the liposaccharides to aggregate was examined These preliminary expts. have demonstrated the ability of the liposaccharides to form particulate systems per se and also their ability to be incorporated into conventional liposomal systems. The structure of the resp.

liposaccharides and the molar ratio of liposaccharide to dimyristoyl lecithin and cholesterol were found to have a profound effect on the type of colloidal systems produced.

IT **192385-41-4P 192385-43-6P 192385-44-7P**
199448-57-2P 199448-58-3P 199448-59-4P
199448-60-7P 199448-61-8P 199448-62-9P
199448-63-0P 199448-64-1P
RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(liposaccharide conjugates for **drug** and peptide delivery)

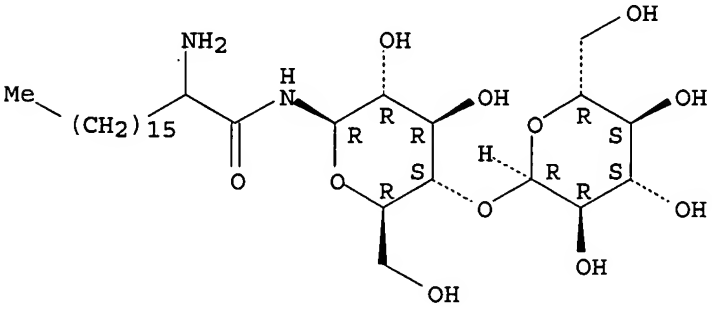
RN 192385-41-4 CAPLUS
CN Octadecanamide, 2-amino-N-β-D-glucopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



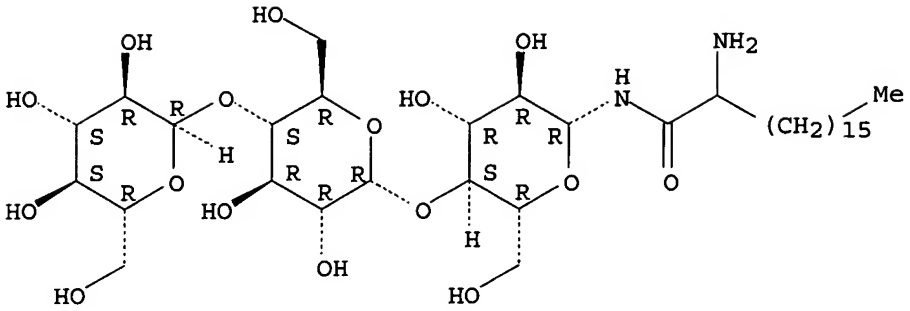
RN 192385-43-6 CAPLUS
CN Octadecanamide, 2-amino-N-(4-O-α-D-glucopyranosyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



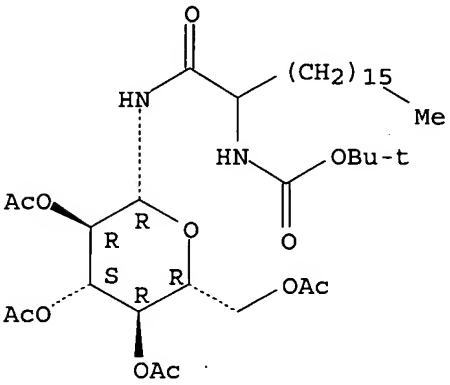
RN 192385-44-7 CAPLUS
CN Octadecanamide, 2-amino-N-(O-α-D-glucopyranosyl-(1→4)-O-α-D-glucopyranosyl-(1→4)-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



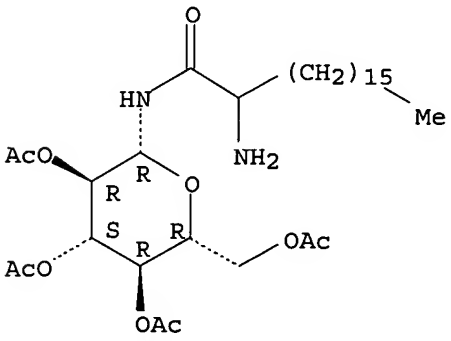
RN 199448-57-2 CAPLUS
CN Carbamic acid, [1-[[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



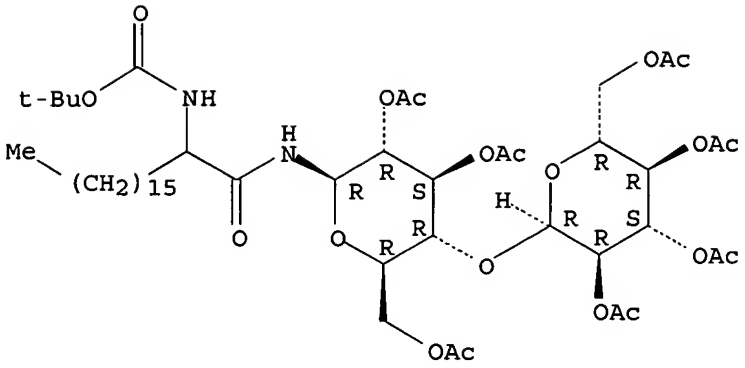
RN 199448-58-3 CAPLUS
CN Octadecanamide, 2-amino-N-(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



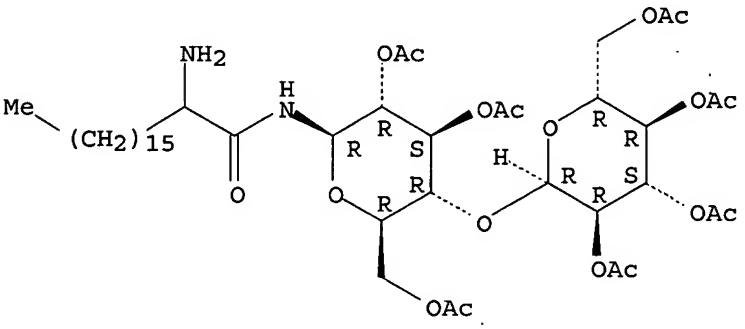
RN 199448-59-4 CAPLUS
CN Carbamic acid, [1-[[[2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl)-β-D-glucopyranosyl]amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



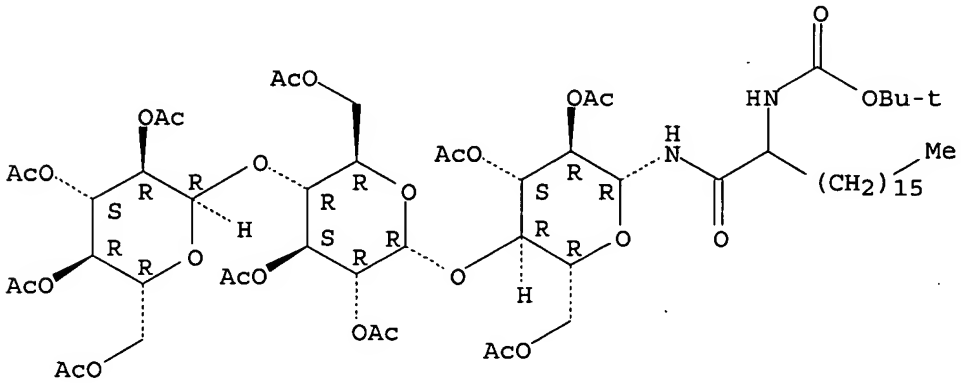
RN 199448-60-7 CAPLUS
CN Octadecanamide, 2-amino-N-[2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl)-β-D-glucopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



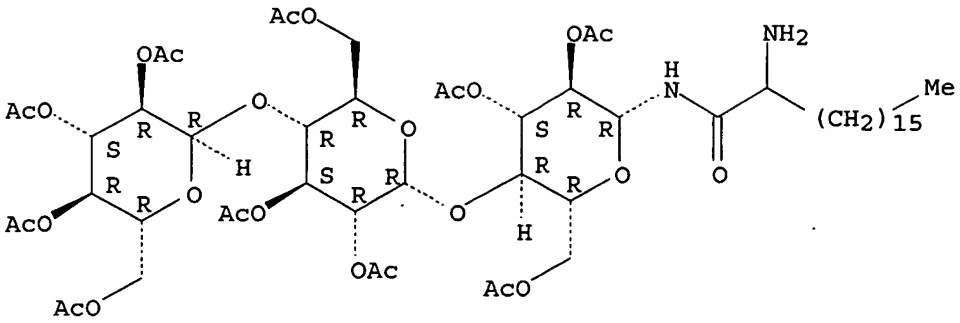
RN 199448-61-8 CAPLUS
CN Carbamic acid, [1-[[(O-2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl-(1→4)-O-2,3,6-tri-O-acetyl-α-D-glucopyranosyl-(1→4)-2,3,6-tri-O-acetyl-β-D-glucopyranosyl)amino]carbonyl]heptadecyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



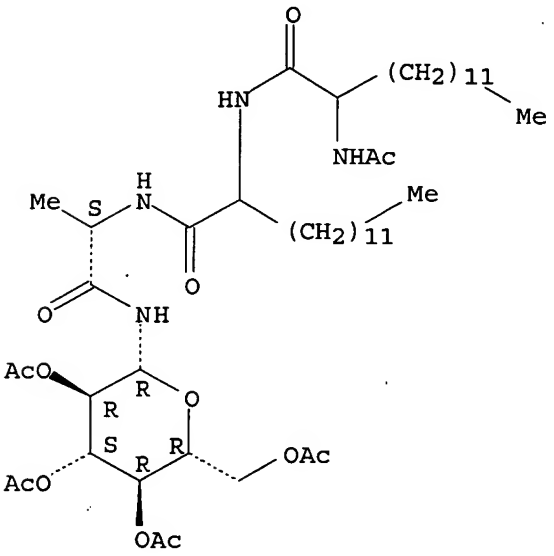
RN 199448-62-9 CAPLUS
CN Octadecanamide, 2-amino-N-(O-2,3,4,6-tetra-O-acetyl-α-D-glucopyranosyl-(1→4)-O-2,3,6-tri-O-acetyl-α-D-glucopyranosyl-(1→4)-2,3,6-tri-O-acetyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



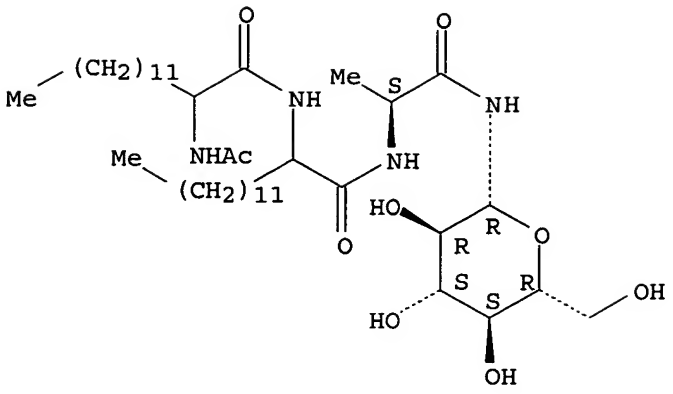
RN 199448-63-0 CAPLUS
CN Tetradecanamide, 2-(acetylamino)-N-[1-[[[(1S)-1-methyl-2-oxo-2-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]ethyl]amino]carbonyl]tridecyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 199448-64-1 CAPLUS
CN Tetradecanamide, 2-(acetylamino)-N-[1-[[[(1S)-2-(β-D-glucopyranosylamino)-1-methyl-2-oxoethyl]amino]carbonyl]tridecyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:565095 CAPLUS
DN 127:239117
TI Cationic **lipids** and liposomes containing them as **drug** delivery agents
IN Sourovoi, Andrej; Jung, Guenther
PA Germany
SO Ger. Offen., 20 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19605175	A1	19970814	DE 1996-19605175	19960213
	CA 2246456	AA	19970821	CA 1997-2246456	19970212
	WO 9730024	A2	19970821	WO 1997-EP629	19970212
	WO 9730024	A3	19970925		
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9717240	A1	19970902	AU 1997-17240	19970212
	AU 713039	B2	19991118		
	EP 883602	A2	19981216	EP 1997-904417	19970212
	EP 883602	B1	20020904		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 11506795	T2	19990615	JP 1997-528976	19970212
	JP 3525393	B2	20040510		
	AT 223374	E	20020915	AT 1997-904417	19970212
	PT 883602	T	20030131	PT 1997-904417	19970212
	ES 2183133	T3	20030316	ES 1997-904417	19970212
	US 6458381	B1	20021001	US 1998-125138	19981014
PRAI	DE 1996-19605175	A	19960213		
	WO 1997-EP629	W	19970212		

AB Lipophilic amine salts and quaternary ammonium compds. R3R4R5N+CH(W)YN[(CH2)nZR1](CH2)nZR2 X- [I; R1, R2 = C6-24 alkyl, alkenyl, or alkynyl; R3-R5 = H, C1-8 alkyl or aminoalkyl, amino acyl, peptidyl; W = H, CO2H, amino acid side chain, etc.; Y = C(O), (CH2)mC(O), (CH2)m, [CH(OH)CH2]m, CH2S(O)pCH2, SO2, etc.; Z = ester, ether, or amide group; X = anion; m = 1-20; n = 1-8; p = 0-2] form complexes with polyanions, especially with DNA, RNA, or peptides, and are useful, alone or as components of

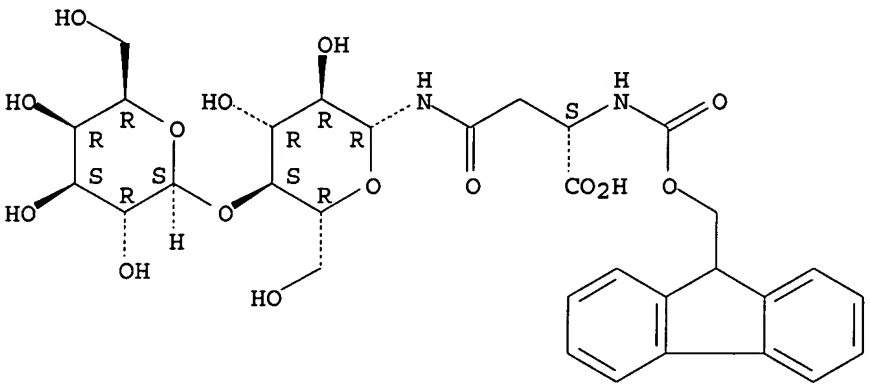
liposomes, for transport of biol. active polyanionic compds. across biol. membranes. I-polyanion complexes may also form ternary complexes with polycations and may be used similarly for transport of polycationic compds. Thus, Boc-Lys(Boc)-OH (Boc = Me3CO2C) was amidated with diethanolamine, esterified with oleoyl chloride, and deprotected to form L-lysine bis(O,O'-oleoyl-β-hydroxyethyl)amide-Dihydrochloride (II). Complexation of II with calf thymus DNA was demonstrated by quenching of the fluorescence of a DNA-ethidium bromide complex. HeLa cells were transformed with a complex of II and plasmid pCMVL DNA (containing the luciferase gene under the control of the cytomegalovirus promoter) 6-fold more efficiently than the same DNA complexes with (dioleoyloxypropyl)trimethylammonium methosulfate.

IT **146387-63-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(cationic **lipids** and liposomes containing them as **drug** delivery agents)

RN 146387-63-5 CAPLUS

CN L-Asparagine, N2-[(9H-fluoren-9-ylmethoxy)carbonyl]-N-(4-O-β-D-galactopyranosyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:752253 CAPLUS

DN 123:218332

TI Reduction of the hemolytic effect in a biologically recognizable β-cyclodextrin

AU Leray, E.; Leroy-Lechat, F.; Parrot-Lopez, H.; Duchene, D.

CS l"Groupe Cyclodextrines Amphiphiles", BIOCIS, Villeurbanne, FG9622, Fr.

SO Supramolecular Chemistry (1995), 5(2), 149-51
CODEN: SCHEER; ISSN: 1061-0278

PB Gordon & Breach

DT Journal

LA English

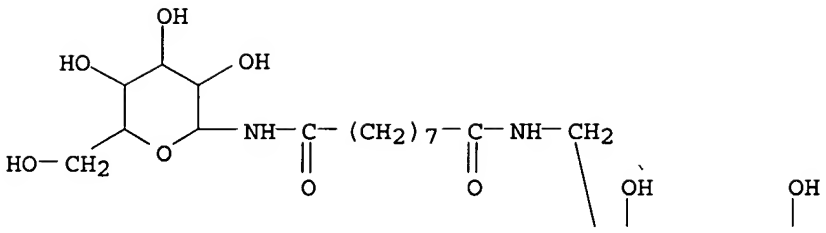
AB β-Cyclodextrin derivs. having azido, amino and **bioactive** galactosylamido **spacer** functions were tested for hemolytic effect and compared with that of hydroxypropyl-β-cyclodextrin. The cyclodextrin coupled to the **bioactive** saccharide galactose via a **spacer** and which has bio-recognition properties for cell-wall lectin shows an extremely reduced hemolytic effect.

IT **156769-72-1**
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(reduction of the hemolytic effect of β-cyclodextrin derivs.)

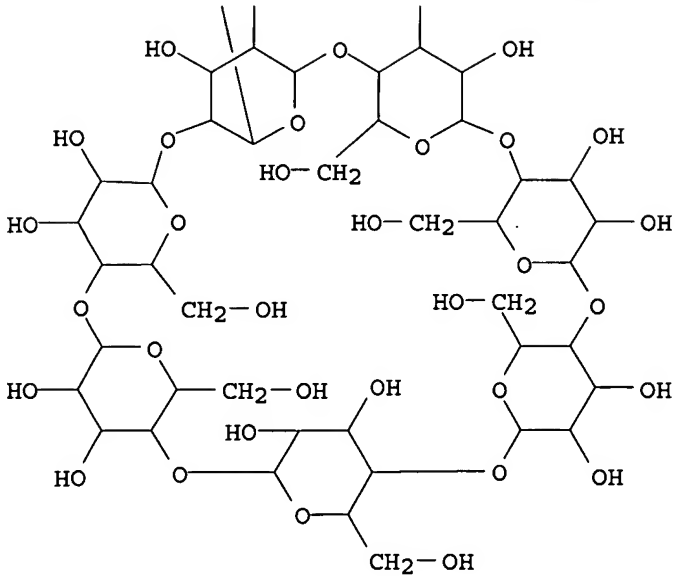
RN 156769-72-1 CAPLUS

CN β-Cyclodextrin, 6A-deoxy-6A-[[9-(β-D-galactopyranosylamino)-1,9-dioxononyl]amino]- (9CI) (CA INDEX NAME)

PAGE 1-A

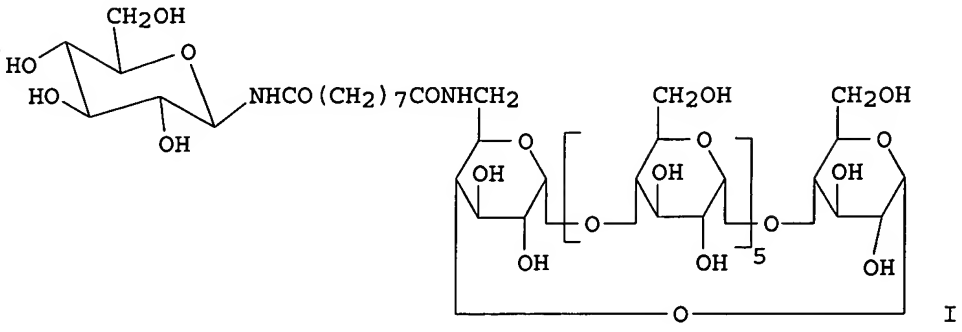


PAGE 2-A



L5 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1992:152238 CAPLUS
DN 116:152238
TI Vectorized transport of **drugs**: synthesis of a new glycosyl derivative of β-cyclodextrin
AU Parrot-Lopez, Helene; Galons, Herve; Coleman, Anthony W.; Mahuteau, Jacqueline; Miocque, Marcel

CS Fac. Pharm., Univ. Rene Descartes, Paris, 75270, Fr.
SO Tetrahedron Letters (1992), 33(2), 209-12
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
OS CASREACT 116:152238
GI

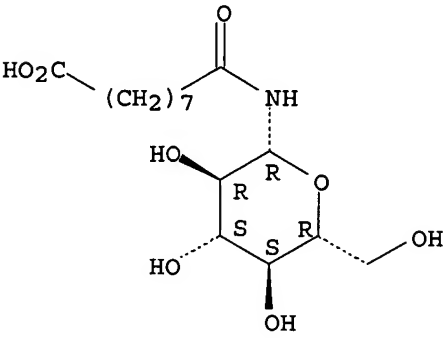


I

AB Monosubstitution at the O-6 position of β-cyclodextrin by a β-N-glucosyl residue was achieved with a C9 diamide **spacer** as the interglycosidic linkage. The new glycosyl derivative I is much more soluble (200 g/L) in water but retains the capacity to include and to enhance the solubility of pharmacol. active mols.

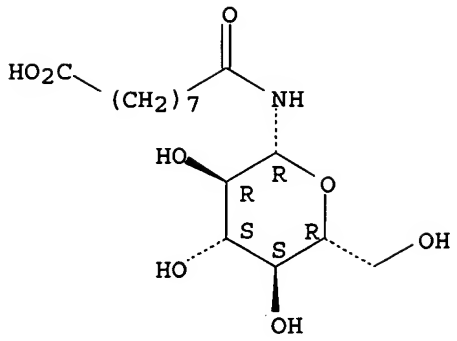
IT **139903-53-0P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and amidation of, with aminocyclodextrin)
RN 139903-53-0 CAPLUS
CN Nonanoic acid, 9-(β-D-glucopyranosylamino)-9-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **139889-11-5P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and neutralization of)
RN 139889-11-5 CAPLUS
CN Nonanoic acid, 9-(β-D-glucopyranosylamino)-9-oxo-, monosodium salt (9CI) (CA INDEX NAME)

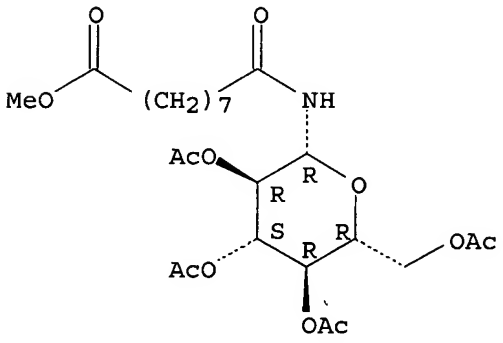
Absolute stereochemistry.



● Na

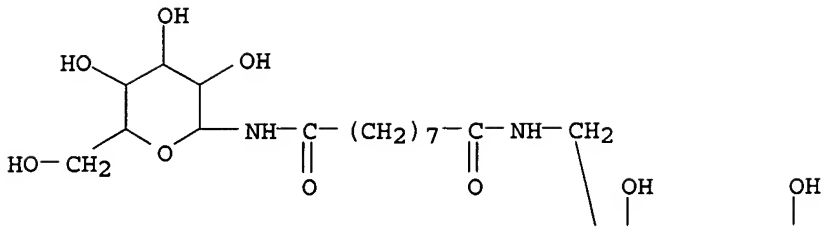
IT **139903-52-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation, deacetylation, and hydrolysis of)
RN 139903-52-9 CAPLUS
CN Nonanoic acid, 9-oxo-9-[(2,3,4,6-tetra-O-acetyl-β-D-glucopyranosyl)amino]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

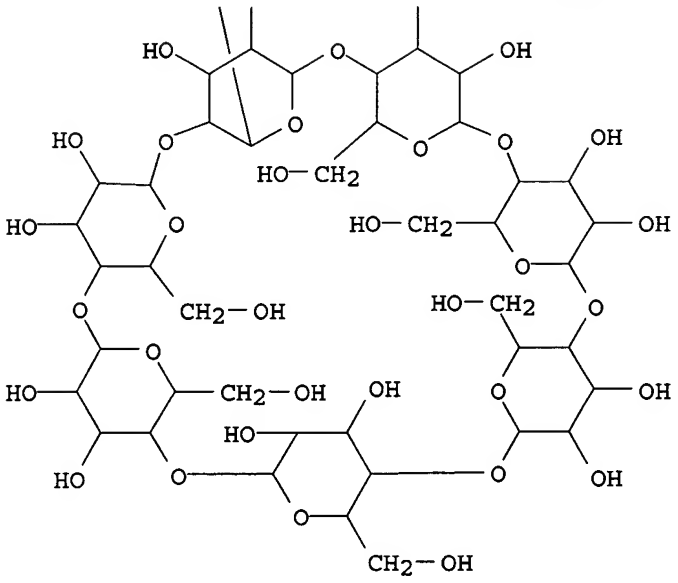


IT **139921-46-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation, solubility, and inclusion reaction of, with nicardipine)
RN 139921-46-3 CAPLUS
CN β-Cyclodextrin, 6A-deoxy-6A-[[9-(β-D-glucopyranosylamino)-1,9-dioxononyl]amino]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A



L5 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1986:485210 CAPLUS
DN 105:85210
TI **Lipid** membrane structures
IN Tomikawa, Munehiro; Hirota, Sadao; Kikuchi, Hiroshi; Yamauchi, Hitoshi
PA Daiichi Seiyaku Co., Ltd., Japan
SO Eur. Pat. Appl., 37 pp.
CODEN: EPXXDW
DT Patent

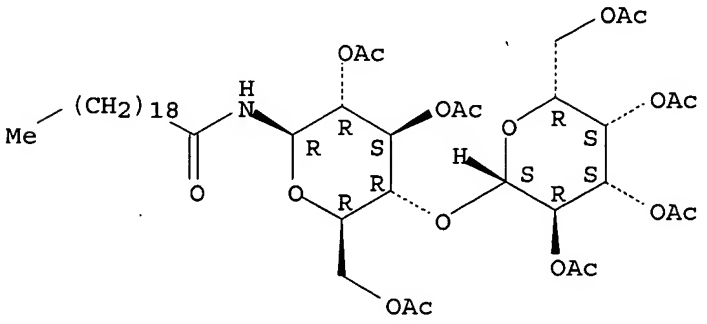
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 180980	A2	19860514	EP 1985-114141	19851106
	EP 180980	A3	19870603		
	EP 180980	B1	19910313		
	R: CH, CH, DE, FR, GB, IT, NL, SE				
	JP 61112021	A2	19860530	JP 1984-233742	19841106
	JP 05005811	B4	19930125		
	US 4960595	A	19901002	US 1987-222309	19871116
PRAI	JP 1984-233742	A	19841106		
	US 1985-795608	B1	19851106		

AB **Lipid** membrane structures, such as liposomes, micelles, or microemulsions, are incorporated with a lactose monofatty acid ester or amide. The **lipid** membrane structures are delivered preferentially to the liver parenchymal cells and are useful as **drug** carriers. Thus, lactose monoarachidic ester was prepared by reacting lactose with arachidyl chloride. The above ester 4, egg yolk lecithin 72, cholesterol 24, phosphatidic acid 8 μmol, 3H-dipalmitoylphosphatidylcholine 15 μCi, and 2 mL phosphate buffered saline containing 115 μCi 14C-tranexamic acid were mixed to form a liposome suspension. The resulting liposome contained 3H-dipalmitoylphosphatidylcholine 2.3 and 14C-tranexamic acid 1.8 μCi encapsulated in the liposomes per 0.5 mL of the suspension. The distribution of liposomes in animal studies showed that liver contained much higher concns. of 3H-dipalmitoylphosphatidyl choline and 14C-tranexamic acid compared to the lung, kidney, and spleen.

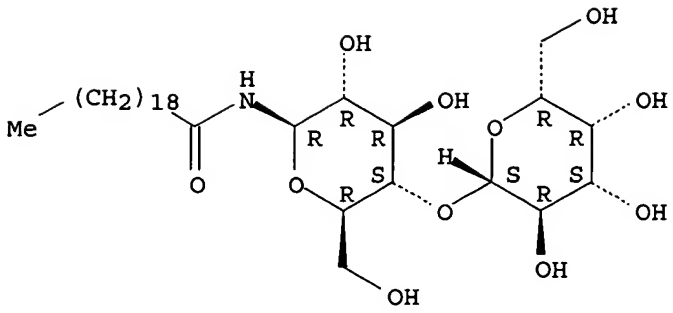
IT **103838-64-8P**
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation and deacetylation of)
RN 103838-64-8 CAPLUS
CN Eicosanamide, N-[2,3,6-tri-O-acetyl-4-O-(2,3,4,6-tetra-O-acetyl-β-D-galactopyranosyl)-β-D-glucopyranosyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

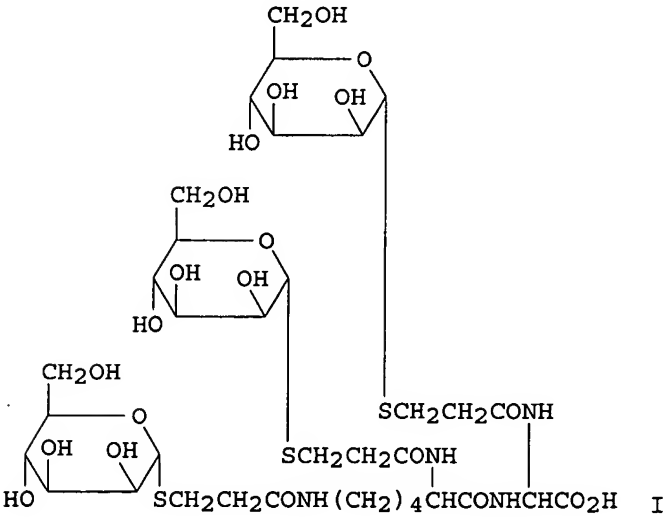


IT **103807-21-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and incorporation of, in liposome)
RN 103807-21-2 CAPLUS
CN Eicosanamide, N-(4-O-β-D-galactopyranosyl-β-D-glucopyranosyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



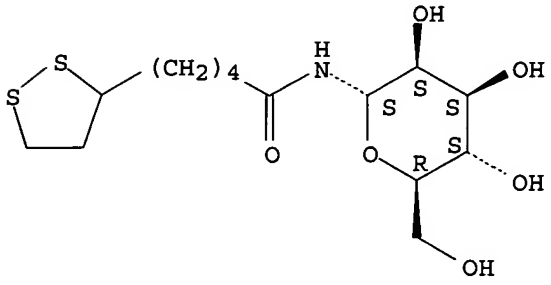
L5 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1981:609468 CAPLUS
DN 95:209468
TI Cell-specific ligands for selective **drug** delivery to tissues and organs
AU Ponpipom, Mitree M.; Bugianesi, Robert L.; Robbins, James C.; Doebber, T. W.; Shen, T. Y.
CS Merck Sharp and Dohme Res. Lab., Rahway, NJ, 07065, USA
SO Journal of Medicinal Chemistry (1981), 24(12), 1388-95
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
GI



AB Various nos. of D-mannose residues were attached via **spacer** arms to lysine, dilysine, and oligolysine backbones. These D-mannosyl peptide analogs were potent competitive inhibitors of the uptake of 125I-labeled D-mannose-bovine serum albumin conjugates by rat alveolar macrophages. The inhibitory potency of these synthetic ligands increased with increasing number of carbohydrate moieties. The chirality of the peptide backbone did not play a major role in binding, whereas variations of the length and linkage of the **spacer** arm affected the inhibitory activities. The saccharide specificity of the macrophage receptor was demonstrated by the inactivity of corresponding D-galactosyl peptide analogs. A L-fucosyl peptide derivative was only weakly active. The trimannosyldi-L-lysine ligand (I) [79390-81-1] (KI = 3.9 μM) and its analogs are potentially useful in selective delivery of therapeutic agents to macrophages.

IT **79360-23-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(polymerization of)
RN 79360-23-9 CAPLUS
CN 1,2-Dithiolane-3-pentanamide, N-α-D-mannopyranosyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

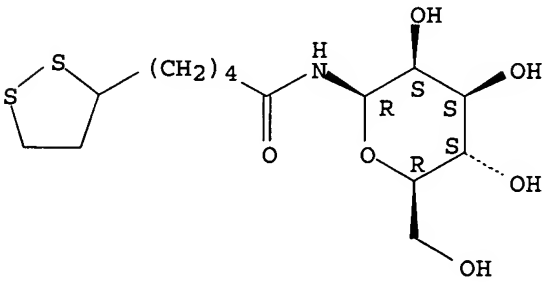


IT **79375-79-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and macrophage binding by)
RN 79375-79-4 CAPLUS
CN 1,2-Dithiolane-3-pentanamide, N-β-D-mannopyranosyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 74761-63-0
CMF C14 H25 N O6 S2

Absolute stereochemistry.



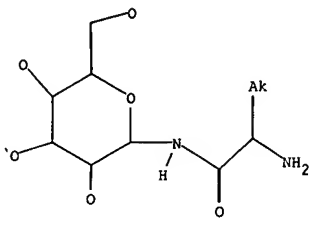
=> dis hist

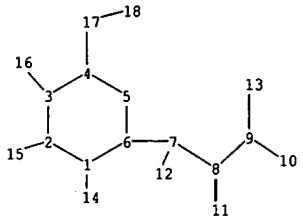
(FILE 'HOME' ENTERED AT 13:53:10 ON 21 DEC 2004)

FILE 'REGISTRY' ENTERED AT 13:53:20 ON 21 DEC 2004
L1 STRUCTURE UPLOADED
L2 50 S L1 SSS SAM
L3 1131 S L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 13:54:41 ON 21 DEC 2004
L4 52 S L3 AND (DRUG OR BIOMOLECULE OR BIOACTIVE?)
L5 20 S L4 AND (SPACER OR LINKER OR LIPID? OR GLYCEROL)

(Untitled)





chain nodes :
7 8 9 10 11 12 13 14 15 16 17 18
ring nodes :
1 2 3 4 5 6
chain bonds :
1-14 2-15 3-16 4-17 6-7 7-8 7-12 8-9 8-11 9-10 9-13 17-18
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-2 1-6 1-14 2-3 2-15 3-4 3-16 4-5 5-6 6-7 7-8 8-11 9-10 9-13 17-18
exact bonds :
4-17 7-12 8-9

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS